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Problems of Economics

Selected Articles from Soviet Economics Journals in English Translation

IN THIS ISSUE

G. Smirnov and N. Iasnovskii: Prospects of Competition Between the USSR and the USA in the Field of Machine-Building (Planovoe Khoziaistvo, No. 8, 1960)

Sector of Economic Competition, Economic Research Institute of the USSR State Economic Council: Different Systems—Different Results (Trud, February 10, 1961)

V. Markov: New Features in Organizing the Material Stimulation of Technical Progress (Planovoe Khoziaistvo, No. 6, 1960)

G. Kosiachenko: Greater Material Incentives and Technological Progress (Planovoe Khoziaistvo, No. 8, 1960)

D. Meerzon: Work Quotas and Wages Under Conditions of Modern Technology (Voprosy Ekonomiki, No. 7, 1960)

S. Plaksin: Fruitful Cooperation Within the Council for Economic Mutual Assistance (Vneshniaia Torgovlia, No. 10, 1960)

I. Rabinovich: Soviet-American Trade Relations From 1923 to 1933 (Nauchnye Doklady Vysshei Shkoly, Ekonomicheskie Nauki, No. 2, 1960)

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Problems of Economics

TABLE OF CONTENTS

III, No. 10 February 1961

COMPARISONS OF SOVIET AND US ECONOMICS

MIRNOV and N. IASNOVSKII: Prospects of Competition Between the USSR and the USA in the Field of Machine-Building (Planovoe Khoziaistvo, No. 8, 1960) 3

TOR OF ECONOMIC COMPETITION, ECONOMIC RESEARCH INSTITUTE OF THE USSR STATE ECONOMIC COUNCIL: Different Systems—Different Results (Trud, February 10, 1961) 12

TECHNICAL PROGRESS, INCENTIVES AND WAGES

IARKOV: New Features in Organizing the Material Stimulation of Technical Progress (Planovoe Khoziaistvo, No. 6, 1960) 17

OSIACHENKO: Greater Material Incentives and Technological Progress (Planovoe Khoziaistvo, No. 8, 1960) 23

OLKOV, Reduction of the Working Day and Adjustment of Wages (Kommunist, No. 13, 1960) 34

IEERZON: Work Quotas and Wages Under Conditions of Modern Technology (Voprosy Ekonomiki, No. 7, 1960) 40

FOREIGN ECONOMIC RELATIONS

LAKSIN: Fruitful Cooperation Within the Council for Economic Mutual Assistance (Vneshniaia Torgovlia, No. 10, 1960) 47

BINOVICH: Soviet-American Trade Relations From 1923 to 1933 (Nauchnye Doklady Vysshei Shkoly, Ekonomicheskie Nauki, No. 2, 1960) 52

EINIK: A Law of Development of Socialist Countries (Ekonomicheskaia Gazeta, October 19, 1960) 62

PROBLEMS OF ECONOMICS

Selected Articles from Soviet Economics Journals in English Translation

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VESTNIK MOSKOVSKOGO UNIVERSITETA, SERIIA EKONOMIKI – JOURNAL OF MOSCOW UNIVERSITY, ECONOMIC SERIES
VESTNIK STATISTIKI – JOURNAL OF STATISTICS
VNESHNIAIA TORGOVLIA – FOREIGN TRADE
VOPROSY EKONOMIKI – PROBLEMS OF ECONOMICS
MIROVAIA EKONOMIKA I MEZHDUNARODNYE OTNOSHENIIA – WORLD ECONOMY AND INTERNATIONAL RELATIONS
NAUCHNYE DOKLADY VYSSHEI SHKOLY – EKONOMICHESKIE NAUKI – SCIENTIFIC PAPERS OF HIGHER EDUCATIONAL INSTITUTIONS, ECONOMIC SCIENCES
PLANOVOE KHOZIAISTVO – PLANNED ECONOMY
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Planovoe Khoziaistvo, No. 8, 1960

IRNOV AND N. IASNOVSKII:

spects of Competition Between the USSR and the USA

ıe Field of Machine-Building

USSR's Seven-Year Plan of economic de-
ıent which was adopted by the 21st Congress
CPSU and which is being successfully car-
ut by our people represents a decisive stage
ating the material and technical basis of com-
m and in the competition with capitalism for
rld's highest level of per capita output.
creation of the material and technical basis
ımunism presupposes both a quantitative in-
e in the implements of labor, first and fore-
of machinery, and a qualitative improvement
se implements. An essential condition for
ng this goal is the acceleration of technical
ess, which calls first of all for the rapid de-
ıent of the machine-building industry — the
ial basis of technical progress, the founda-
r a growth in the productivity of social labor.
s why such great attention is devoted in the
s Seven-Year Plan of economic development
hine-building and especially to those of its
ıes that provide for the chief trend in techni-
ogress, i.e., the electrification, mechaniza-
d automation of production, and for the in-
ng application of chemistry in production.
e years of Soviet power our country's ma-
building industry has become one of the most
ped branches of heavy industry. By 1958 the
output of the machine-building and the metal-
g industry of the USSR topped the 1913 level

calculations cited in this article are based
from American sources: Supplement to the
of Current Business, US Income and Output,
958; Statistical Abstract of the US, 1956,
953-1957; Annual Survey of Manufactures;
Council for Technological Advancement, No.
c. 10, 1953; Federal Reserve Bulletin,
60; Facts for Industry — Machine Tools,
orking Machinery, Tractors, Construction
ıery, Farm Machinery and Equipment, Auto-
News, Almanac, Electrical World, etc.

almost 140-fold. The giant leap in the production of different kinds of machines and equipment was made within a very short period of time — 23 or 24 years (18 or 19 years of the 42 years of the existence of Soviet power were spent on wars and on the restoration of the national economy). The Soviet Union's machine-building industry has come to equal, insofar as its technical level is concerned, the machine-building industries of the most economically developed capitalist countries and, in some fields, it has surpassed the technical achievements of the capitalist world. By the beginning of the Seven-Year Plan period the Soviet Union was second only to the USA as regards the gross output of the machine-building industry.

What are the chief characteristics of the machine-building industry of the USA — the capitalist country which has the most developed material and technical base and the highest productivity of labor that has been attained under capitalist production conditions?

The total number of persons employed in the machine-building and metalworking industry of the USA is now some 20% lower than those employed in these industries in all the West European countries taken as a whole, while the total number of workers is 30% less. However, according to our calculations the value of output of the USA's machine-building industry is approximately 1.7 times greater than that of the countries of Western Europe. Actually the gross output of the American machine-building industry is approximately 30 to 40% greater than that in Western Europe, for the level of prices for most types of machines and equipment in the USA is higher than in West European countries. The average output per worker in American machine-building is about double that in West European machine-building industries.

In 1959 the machine-building and metalworking industry of the United States employed some 6 million persons, including 4.2 million production

workers (the 1957 figures were 6.4 and 4.7 million persons, respectively). In recent years American machine-building and metalworking has been employing a little less than two fifths of all personnel employed in manufacturing and over a tenth of all personnel employed in the USA's national economy. The share of machine-building and metalworking in the total value of gross output of American manufacturing industries is one third, and it is two fifths of the value of so-called net output (newly created value plus amortization).

Such a ratio between gross and net output indicates that specialization and cooperation in production in American machine-building are developed to a greater degree than in other branches of the manufacturing industry. We have estimated the gross output of US machine-building (excluding metalworking) in 1957 at 94 billion dollars. Of this amount, 64 billion dollars (68%) represented gross output excluding double counting, or the so-called final product of machine-building (machines and equipment used in production as material carriers of fixed capital in various economic branches; machines, apparatus and devices for household use; armaments and various types of equipment military purposes). Calculations also show tha out of the total value of machine-building produ tion in the USA approximately 49 billion dollars represent the cost of the raw materials, supplie semi-manufactured goods, power and fuel consumed in the production process, and that the s of net output was only 45 billion dollars, or 48% Bearing in mind that the value of net output includes about 5% for amortization, the newly cre ated value in the gross output of American machine-building constitutes 45% (see Table 1).

The data presented in Table 1 show that the r lationship between the gross and net output of m chine-building in the USA has not undergone an substantial changes for a rather long period of time. This makes it more or less appropriate compare the rate of growth of machine-building the USA, as calculated by American statistical agencies, in terms of net output, with the rate o growth of the USSR's machine-building which a know is calculated in terms of gross output. (1

Table 1

Value of Machine-Building Output in the USA
(in billion dollars, in prices of the corresponding years)

	1939	1950	1957	1958	1959
Gross output	10.4	51.3	94.0	81.5	99.0
Final product (gross, without double counting)	6.9	30.6	63.7	—	—
Final product in % of gross output	66	60	68	—	—
Net output	4.9	21.9	42.7	—	—
Net output in % of gross output	47	43	45	—	—

What is the structure of American machine-building output and what are the chief features of its utilization?

Considerable changes have taken place in the structure of machine-building in the USA in the post-war years. They have been connected, first and foremost, with the United States' cold war policy and with the militarization of its economy. The share of armaments and military equipment in the total output of the machine-building industry has grown from 3% to 20-23%. The relative growth in the output of military equipment by American machine-building was accompanied by a declin the share of industrial equipment in total mach building output. The share of household equipm and motor cars for private use in the total outp of the USA's machine-building industry remain practically unchanged, while in the output of ma chinery for civilian uses this share increased from a quarter to a half. (See Table 2 shown o the top of the following page.)

An analysis of the changes that have taken pl in the structure of American machine-building put indicates that about three quarters of its

Table 2

Structure of Final Product of the USA's Machine-Building Industry*
(in billion dollars, in prices of the corresponding years)

rs	Final product		Structure in % (in prices of corresponding years)				
	billion dollars (in prices of corresponding years)	physical volume index (1950= 100)	Implements of labor	Consumers' goods		Armaments and military equipment	Total motor cars**
				total	including motor cars for personal use		
	2	3	4	5	6	7	8
7	8.1	48	70.6	28.2	17.7	1.2	40.5
9	6.9	40	69.5	27.6	21.7	2.9	40.9
7	24.6	90	71.6	24.5	13.2	2.9	26.7
0	30.6	100	57.1	37.2	23.4	8.7	33.7
1	39.8	117	58.4	29.0	19.0	12.6	30.2
2	45.7	133	55.1	23.4	15.1	21.5	24.9
3	51.5	152	50.3	26.4	17.0	23.3	25.4
4	47.8	139	51.3	26.0	17.4	22.7	25.1
5	53.9	153	50.4	30.7	22.1	18.9	30.7
6	59.5	161	55.6	25.7	17.1	19.9	25.3
7	63.7	163	53.0	26.4	18.3	20.6	26.4

* Calculations by the authors, based on official US statistics.
** Included in columns 4, 6 and 7.

in the period 1950 to 1953 — the years of st intense armaments' drive in the United — was due to the increased output of arma- and other military equipment. While the post-war years — 1950 to 1957 — showed an e annual increase of less than 2.5% for indus- quipment output, the average annual increase output of armaments and military equipment ed 18.5%. At the same time it should be hat a considerable part of the industrial ent produced in the USA in the postwar years g used in enterprises producing armaments. the militarization of the American economy d a great effect on the development of the ma- building industry of the USA and has brought harp changes in the structure of its output. calculations of the structure of the final t of machine-building output, as shown in 2, are borne out by recently published offi- data on the structure of the net output of an industry in 1957. (2) A comparison of culations with the official data presents the ng picture of output structure for American machine-building (in %). (See table shown on the top of the following page.)

Considering the rather small divergence and the somewhat different economic content of the two rows of figures (our calculation characterizes the structure of the final output of machine-building in terms of its full value, while the American data characterize it in terms of its net output which is part of the value of the final product), we may accept them as presenting a correct picture of the actual sturcture of US machine-building output.

The official data on the structure of American machine-building output in 1957 have made it possible to ascertain that the labor implements used in industry represented 60% of all the production equipment produced, farm machinery accounted for 4.8%, transport facilities for 15%, and fixed capital for other economic branches covered 20.2%.

In solving its historic task — catching up with and surpassing the USA in per capita output, labor productivity and standards of living — the Soviet

	Implements of labor	Consumers' goods		Armaments and military equipment	Total motor cars
		Total	including motor cars for personal use		
Structure of full value of final product (our calculation)	53.0	26.4	18.3	20.6	26.4
Structure of value of net output as shown in final product (official data)	58.3	25.1	17.2	16.7	25.0

Union does not have to copy the structure of the US economy. The USSR's national economy as a whole and its machine-building in particular have been and will be developing in conformity with laws that are inherent in the new mode of production, one which is more advanced than the capitalist mode of production. Thus, our country does not have to compete with the USA in the production of automobiles, for the needs of the Soviet Union's population for transport facilities will be satisfied mainly by means of extensively developing the public transport system, a method which is economically much more efficient. Moreover, the large-scale development of the system of public food catering and of other establishments designed to service the population of our country, will result in a lower demand for certain types of household devices and apparatus than in the USA. All these and many other social, economic and national characteristics of the development of the USSR and the USA have been and will be exerting an important influence both on the structure of machine-building output and on its utilization.

We may safely assume that the Soviet Union will first catch up with and surpass the USA in the output of production equipment, and then will do so with regard to the total volume of machine-building production. Since the socialist mode of production provides the opportunity of using fixed capital more efficiently, the Soviet Union, on having overtaken the USA in the output of production equipment, will be able to attain a greater production growth than the USA by putting this equipment into service.

The prospects both for peaceful competition between the USSR and the USA in the field of developing the key branch of the economy — the machine-building industry — and in economic competition as a whole depend, first, on the initial level of development of the branch and, second, on the possible rates of its subsequent growth.

Before examining these questions we should to stress that many of the problems involved in comparative analysis of the economic developm of individual countries, especially if they have ferent social-economic systems, have not yet b fully solved. Moreover, in comparing the level and rates of development of the USSR's and the USA's machine-building industries, there are a number of additional difficulties of both a meth dological and statistical nature. That is why al the comparisons presented below are to be regarded as provisional estimates which will be fined and improved in the future.

The Soviet Union's machine-building and met working industry has been growing at an incom parably faster rate than that of the USA. In 19 the gross output of machine-building and metal working in the USSR surpassed the 1917 level more than 200 times. The output of American chine-building and metalworking during this pe increased by slightly more than 5 times. Even during the years of World War II and the imme postwar years, when the Soviet Union's machin building industry experienced tremendous diffi ties, the growth of the sector of Soviet industry not yield to American machine-building. In the past decade the rate at which machine-building metalworking production has been growing in t Soviet Union has been much higher than in the The average annual rate of growth of machine-building and metalworking production in the pe 1950 to 1959 amounted to 15.5% in the USSR an in the USA.

In estimating the prospects for the competit of the USSR and the USA in the field of machin building, we must take into account not only th viet Union's great advantage in the rate of gro of this branch, but also the fact that the output

untry's machine-building has now reached a
hich provides for a greater absolute annual
se in the production volume of machine-
g and metalworking than in the USA. This
that the Soviet Union has entered upon the
ve stage in meeting its chief economic objec-
the field of machine-building and that the
tween the output levels of the USSR and the
this key branch of heavy industry will de-
t a steadily increasing rate.
t is the relationship between the levels of
pment of the USSR's and the USA's machine-
g industries at present?
958 the USSR's machine-building industry
ed 4.9 million workers. That is 20% more
ere employed in the USA in the same year
more than in 1957. The share of the ma-
building and metalworking industry in the
umber of industrial workers employed in the
was a little over 30%, while in the USA it was
33%. Thus, there was no great difference be-
the machine-building and metalworking in-
es of the Soviet Union and the United States
erica as regards the number of workers
yed. However, American machine-building
ahead of Soviet machine-building as re-
the output of most kinds of goods.
may judge the production levels in the USSR
USA of some types of machine-building
by the data presented in Table 3 which has
ompiled on the basis of official statistical
s as well as our own estimates. (See Table
n on the following page.)
data cited in Table 3 show that the Soviet
has already approached or even surpassed
A in the number of metal-cutting machine
trunk locomotives and railway cars, trac-
nd grain harvesting combines. But our coun-
ll lags behind the USA in the output of power
ting equipment, forge-press machinery,
ting and road construction machinery, trucks,
l as household devices and apparatus. The
Union produces less metal-rolling and steel-
g equipment (approximately 50% less) than the
ess chemical apparatus, electric motors and
l combustion engines, machines and equip-
or the consumer, food and several other in-
es.
ould however be noted that a comparison of
a on the output of individual types of ma-
y and equipment does not give a full picture
relative levels of machine-building.
der to ascertain the relationship between
al volumes of machine-building output we
esort to value indices, although their com-
n involves a certain degree of rough estimation.

Our calculations, based on data published by the USSR Central Statistical Administration and on the materials of American statistical publications, show that in 1958 the share of machine-building and metalworking in the industrial output of the USA amounted to about a third; in the Soviet Union this share was somewhat smaller. The number of workers employed in the Soviet Union's machine-building and metalworking industry in the same year exceeded the number in the corresponding branch of American industry by 20%, while the production volume of this industry in the USSR amounted to 40 to 44% of the production volume in the USA.

Thus in 1958 the Soviet Union produced 40% to 43% of the machine-building and metalworking output of the USA. However, in the decisive branches of machine-building the Soviet Union's lag is considerably less than this. First of all, about 15 or 16% of the total volume of output of American machine-building and metalworking is accounted for by metalworking; whereas the share of metalworking in this branch of industry in the USSR is much smaller. Second, the share of cars for private use is quite big (over 15%) in American machine-building. In the Soviet Union this item covers only a minor portion of machine-building and metalworking production. Bearing these factors in mind we may justly state that in 1958 the Soviet Union's output of production equipment was less than 50% below that of the USA.

Although the productivity of labor in the Soviet machine-building and metalworking industry is growing at a faster rate, output per metal worker in the USSR lags behind output per worker in the American metalworking industry. We have estimated the annual labor productivity of workers in the American machine-building and metalworking industry in 1958 to have been about 2.8 to 3 times the USSR level. This is due to the higher level of labor mechanization and automation in US machine-building and metalworking, especially in branches with large-scale serial and mass production, as well as the greater power supply and the larger-scale application of advanced methods of metal processing.

In 1958, i.e., at the beginning of the Seven-Year Plan period, the Soviet Union had the world's second largest stock of metal-cutting machines and units of forge-press equipment; it was second only to the USA. There were 1.9 million machine tools and 0.4 million units of forge-press equipment in the USSR, as compared with 2.3 million machine tools and 0.7 million units of forge-press equipment in the USA. Of course, this numerical superiority in machine tools and units of forge-press

Table 3

Output of Some Types of Machines and Equipment in the USSR and the USA

Items	Unit of measurement	USSR		USA		USSR in % of US.
		1958	1959	1957	1958	1958
1	2	3	4	5	6	7
Metal-cutting machine tools	thousands	138.6	145.7	156 *	—	88**
Forge-press machines (mechanical)	thousands	26.2	28.5	52.9	—	50**
Turbines	million kw.	6.6	7.6	17.6***	21.8***	30
Turbine generators	million kw.	5.2	6.5	15.4***	19.3***	27
Power transformers	million kilovolt-amperes	30.5	—	72.1****	47.2****	65
Trunk locomotives	items	1,056	1,437	1,791	434	244
Freight railway cars	thousands	40.3	38.6	100.4	44.0	91
Passenger railway cars	items	1,782	1,789	841	130	1370
Trucks and busses	thousands	389.2	370.5	1,084	877	44
Tractors	thousands	219.7	213.5	281 *****	273 *****	80
	million h.p.	6.3***	6.2***	6.3***	6.2***	102
Grain combines	thousands	65.0	54.7	44.7	46.0	141
Excavators	thousands	10.2	10.2	25.0	—	41**
Motor graders	thousands	2.7	2.8	8.3	—	33**
Scrapers	thousands	2.7	—	5.6	—	48**
Bulldozers	thousands	11.0	—	18.0	—	61**
Radio sets	thousands	3,902	4,038	15,428	12,577	31
TV sets	thousands	979.4	1,278	6,399	4,220	20
Household refrigerators	thousands	359.6	426	3,350	3,117	11
Washing machines and other household devices	thousands	538.4	724	3,685	3,672	15

* Excluding special machine tools for modeling shops, garages, laboratories, etc.
** USA — data for 1957.
*** Estimated partially.
**** Transformers of over 501 kilovolt-ampere capacity.
***** In addition, 178 thousand garden tractors and motor cultivators were produced in 1957, and 161 thousand in 1958.

ɔment by the USA has a certain effect on the re-
ıship between the output volumes of the Soviet
he American machine-building and metalwork-
ıdustries. However, it is the qualitative char-
ɨistics of the stock of machine tools and forge-
s equipment, a factor in which the USSR is still
ior to the USA, that has a much greater influ-
on this relationship.

e share of forge-press equipment in the ma-
ɨry stock of the USSR is smaller than that in
ıachinery stock of the USA, and this alone is
dication of a certain lag in the application of
ıced methods to metalworking technology in the
. This is also borne out by the smaller share,
ɔmpared with the USA, of advanced types of
ɔment both in the stock of metal-cutting ma-
ɛs and in their output in the Soviet Union. The
e of machine tools over 20 years old in the ma-
ɨry stock of the USSR's machine-building and
lworking industry is greater than in the USA,
eas the number of automatic production lines,
ial and multi-position machine tools, as well
achine tools with program control, is smaller.
doubtlessly exerts a considerable influence on
roductivity of labor in machine-building and
lworking.

the period between 1948 and 1958 the average productivity of metal-cutting machine tools in the USA increased by 50%, while for some advanced types of machine tools it increased much more: for the group of jig boring machines — by 200%, for multispindle drilling machines and automatic lathes — by 225%, for the group of internal-grinding machines — by 275%, for honing machines — by 350%. Estimates show that over 50% of the capacity of the entire machine tool stock in the USA today consists of machine tools of modern design, which were put in operation not more than 10 years ago.

In contrast to the USA, the majority of the newly produced machine tools in the USSR were not used to renovate the existing stock but to enlarge it. Between 1955 and 1958 less than 2% of the entire machine tool stock of the USSR was renewed annually.

Finally, although Soviet industry is capable of producing machine tools for any purpose and of any dimensions and designs, machine tools which are in no way inferior insofar as efficiency is concerned to the most advanced models of foreign engineering, not all of the machine tools produced conform to the latest requirements. This is especially true of precision machine tools and of some types of general-purpose universal machine tools.

Table 4

Some Indices Characterizing the Engineering Base of the USSR's and the USA's Machine-Building and Metalworking Industries in 1958

	USSR	USA
Ratio of metal-cutting machine tools to forge-press equipment	83:17	76:24
Share of advanced types of equipment in the stock fleet of metal-cutting machine tools (in %):		
automatic and semi-automatic lathes	4	5.0
boring lathes	2	3.7
grinding and polishing machines	12	17.2
Share of machine tools over 20 years old in the machine-tool stock of the machine-building and metalworking industry (in %)	20-21	16.2

e higher level of development of the engineer-
ase of American machine-building and metal-
ing is also manifested in the ratio of machine-
ing and metalworking output per machine tool
e USSR and the USA. In 1958 this ratio, ac-
ing to our estimates, was 1:2.

The 1959-1965 economic development plan adopted by the 21st Congress of the CPSU has set before the Soviet Union's machine-building and metalworking industry the great task of providing the national economy with basically new equipment which will permit a fundamental improvement in

production processes and will sharply raise the productivity of labor.

In conformity with the target figures for 1965 the gross output of machine-building and metalworking is to be approximately doubled as compared with the 1958 level. This means that even if the USA succeeds in maintaining the rate of production growth in the machine-building and metalworking industry which was characteristic of the last decade, the output of Soviet machine-building and metalworking will reach 60% of the general American level by 1965, and catch up with the USA in the output of equipment for production purposes.

The rapid development of the machine-buildin and metalworking industry will permit us to bas cally re-equip metallurgy, the chemical and oil dustries, transport and other branches of the na tional economy with highly efficient and econom cally effective machinery.

By the end of the Seven-Year Plan the Soviet Union's machine-building industry will be produc the following quantities of the most important machines and instruments:

***

	1965	Increase between 1958 and 1965
Metal-cutting machine tools (thousands)	190-200	1.4-1.5 times
including:		
special, specialized and aggregate machine tools (thousands)	38	2 times approximately
Forge-press machines (thousands)	36.2	1.5 times
Automatic and semi-automatic lines (sets)	280-300	2.1-2.3 times
Instruments (billion rubles)	18.5-19.2	2.5-2.6 times
including:		
computers and adding machines (billion rubles)	2.0-2.1	4.5-4.7 times
Turbines (million kw.)	18.7-20.4	2.8-3.1 times
Turbine generators (million kw.)	17.5-18.4	3.4-3.5 times
A. C. Electric motors (million kw.)	32-34	2.2-2.3 times
Metal rolling equipment (thousand tons)	200-220	2.3-2.6 times
Chemical equipment (billion rubles)	3.5-3.7	3.2-3.4 times
Process equipment for textile industry (billion rubles)	2.5	2.2 times
Process equipment for food and flour-milling industry (billion rubles)	3.8-4.1	2.1-2.3 times
Motor vehicles (thousands)	750-856	1.5-1.7 times
Electric and Diesel locomotives for trunk lines		
(number)	2,550-2,700	2.4-2.6 times
(million h.p.)	8.4-9.0	2.9-3.1 times
Process equipment for cement industry (thousand tons)	180-220	2.5-3.1 times
Foundry equipment (million rubles)	360-410	2.3-2.6 times

The rapid development of the Soviet Union's machine-building and metalworking industry under the Seven-Year Plan will be ensured by a quantitative and qualitative growth of its engineering base, in particular by raising the share of advanced types of metal-cutting machine tools, high-efficiency forge-press machinery, automatic production lines and other kinds of qualitatively new equipment in its machinery stock. In the course of these seven years our machine tool industry will produce m than 1.1 million metal-cutting machine tools; th will permit us to replace approximately 600 tho sand obsolete and worn out machine tools (abou 30% of the entire stock in operation today) and t

ıse the stock of metal-cutting machine tools to illion units in 1965. The planned growth of la- roductivity and the increase of machine- ng and metalworking production will be en- both by replacing the old equipment by new, efficient machinery, and by modernizing 400 thousand machine tools. This is tanta- to commissioning 160 thousand new machine at a much lower cost.

haracteristic feature of the Seven-Year Plan nomic development, which represents a de- step in creating the material and technical of communism, is the fact that this period ee the basic completion of comprehensive anization of production processes in industry e transition from the automation of individual gates and production sections to comprehen- utomation, to the creation of fully automated , production processes and enterprises.

ecisive role in carrying out these great tasks gs to the Soviet Union's machine-building in- y. In 1959, a year which has gone down in y as a landmark of paramount importance, beginning of a new historical period, the So- nion's machine-building industry has scored successes. The production plan was ex- d for a large number of important kinds of nery and equipment, including steam and hy- c turbines, electric motors of up to 100 kw., -cutting machine tools, forge-press machines, diesel-locomotives, and excavators. Over items of important new categories of ma- s, mechanisms and equipment were designed uilt, and about 400 of them put into serial pro- n. Over 1,400 automatic, semi-automatic and conveyer lines started operating in industry.

champions of capitalism cannot help but see viet Union's successes in creating the mate- nd technical basis of communism. They are ally beginning to realize the inevitable out- of the competition between the two systems, lize the fact that time works for communism. respect the statement made in October 1959 orge Kennan, former US ambassador to the is quite revealing: "If you ask me, as a ian, whether a country in the state our country oday ... has a good chance in the competition uch a purposeful, serious and disciplined y as that of the Soviet Union, then I must say that the answer is 'No.'" [retranslated from the Russian — editor.]

Looking into the near future, beyond the boundaries of the seven-year period, we can say that some 10 to 15 years from now the Soviet Union will have surpassed the United States not only in the output of all major types of machine-building production, but also in the volume of production of the machine-building and metalworking industry as a whole. The output of equipment in our country will increase immensely. But does this mean that the Soviet Union will produce, say, 500 to 600 thousand or even more machine tools, a million tractors, hundreds of thousands of tons of metal-rolling equipment, etc., every year ? Of course not.

The highest productivity of labor in the world and the greatest abundance of farm and industrial goods will be attained in our country, first and foremost, by employing the types of machines and equipment in the national economy which, in their technical and economic indices, will greatly surpass the best models of present-day engineering.

When we speak about the victory of socialism in its competition with capitalism in the field of machine-building, about the creation of the technical basis of communism, we do not only or particularly imply a quantitative growth in the output of the most important machines and equipment; it is their qualitative improvement that we have in mind.

The tasks that face the Soviet Union's machine-building industry during the next 15 to 20 years are truly immense in scope. This industry is to play the decisive role in ensuring the necessary rate of technical progress and in raising the technical level of socialist production, i.e., in creating the decisive conditions for the comprehensive construction of the material and technical basis of communism.

Footnotes

(1) Actually, the data in Table 1 show the difference between the growth rates of the USA's gross and net machine-building output for the period 1939 to 1957 to be not over 3 or 4% — a figure which cannot have a significant influence on the relationship between the growth rates of machine-building in the USSR and the USA.

(2) These data were published in connection with the calculation of a new index of industrial production in the USA.

Trud, February 10, 1

SECTOR OF ECONOMIC COMPETITION, ECONOMIC RESEARCH INSTITUTE OF THE USSR STATE ECONOMIC COUNCIL:

Different Systems—Different Results

The Year Under Socialism and Capitalism

Another year of the economic competition between the two social systems has passed. Its results show that in this competition socialism is winning in the most important sense — it is winning an edge in time, which we measure by the development of the productive forces. This is graphically borne out by the report of the Central Statistical Administration of the USSR on the fulfillment of the Soviet national economic plan on the one hand, and the economic results of the year in the United States on the other.

The past year was a good one for Soviet economy, for the Soviet people. Industrial output grew by almost 10%, considerably exceeding the planned assignment for the second year of the Seven-Year Plan. There was a rapid increase in the extraction of oil and gas, the most economical fuels. Technical progress was marked by a particularly rapid growth in the output of modern electrical, power and chemical equipment, automatic instruments and synthetic fibers. The foundations were laid for a further improvement in the structure of production: with a total increase of 11.5% in capital investment, investment in the chemical industry grew by 33% and in the machine-building industry by 23%.

Despite unfavorable weather conditions, good results were scored in agriculture. According to preliminary data, in 1960 the gross harvest of grain was 445 million poods higher than in 1959. There was an increase in the output of meat, milk and eggs. This resulted in greater sales of consumer goods to the population.

Real incomes per working person went up by 5%. From the social welfare funds (those for public education, medical services, social maintenance and various payments and benefits) the population received 24.5 billion rubles or 1.5 billion rubles more than in 1959.

But in the United States of America, the main capitalist country, the development of productive forces declined sharply. After skidding for many months, its economy again began to slip down slowly toward the end of the year.

"The present state of the economy is disturbi President Kennedy stressed in his recent State the Union Message. "We take office in the wake seven months of recession, three and a half yea of slack, seven years of diminished economic growth, and nine years of falling farm income."

American economists call 1960 "a year of frustrated hopes and disappointments." It began with much pomp and fanfare, however. Former President Eisenhower claimed in his January m sage to Congress that it would be a year of "unprecedented prosperity" for the United States. newspapers of the monopolies assured their rea ers that not a single cloud obscured the prospec of the US economic growth. But the end of the y heard wailing about "economic instability," "com depression," and an increasing number of "distressed areas." "The clouds of recession are thickening," Newsweek wrote in December.

There are more than enough reasons for alar

By the end of the year industrial production i the United States dropped by 5% compared with beginning of the year. Enterprises in some indu tries operated at 40 to 50% below capacity. The backlog of orders shrank to the level of the wor months of the 1958 crisis.

All this greatly affected the position of the Un States in the economic competition with the Sovi Union — both materially and morally. "The Am icans are stunned, not so much by the decay of American system, as by some supernatural effe tiveness of the Russian system," wrote US jour nalist Alexander Werth.

Victory in Economic Competition is Approach

The end of the Seven-Year Plan is still far in future, but it is already clear that it will be ful filled ahead of schedule. The time required for Soviet Union to occupy first place in the world i the level of economic development is approachi faster than we expected two years ago at the 21 Congress of the CPSU.

ler the Seven-Year Plan, by 1965 the Soviet is to reach the 1958 level of industrial pro- n in the United States — if the average annual f increase in industrial output is maintained %. However, the actual rate in the first two of the Seven-Year Plan was 10.5%. This s it possible for Soviet industry to reach the vel of 1958 not in 1965 but in 1964. This is out by the following simple calculations. 958 Soviet industrial output equalled about f the US level at that time. With annual in- es of 10%, in 1959 it reached 66% and in 1960, of the US level in 1958). If this pace is main- l, in 1964 Soviet industrial output will be of the 1958 level in the United States.

some of the most important industrial goods evel will be surpassed even earlier; for in- e, in steel — in 1962-1963, and in cement — 61-1962. And if it is borne in mind that the Union is already ahead of the United States volume of production of a number of indus- and agricultural goods (iron ore, timber pro- nent, main-line electric and diesel locomo- woolen cloth, butter, milk, fish catch, etc.), omes clear that the Soviet Union is already aching the US level of 1958.

ent years have also seen a marked change in elationship between the current (i.e., simul- us) levels of industrial output in the USSR and SA. At the present time industrial output in SSR is approximately two-thirds of gross in- ial production in the United States.

rapid and steady development of all branches iet industry on the one hand, and recessions rises in the development of American produc- n the other, inevitably diminish the gap between the levels of output in the USSR and the USA. This is vividly illustrated by the following figures in steel output:

Steel Output in the USSR and the USA
(in millions of tons)

Year	USSR	USA
1950	27.3	87.8
1951	31.4	95.4
1952	34.5	84.5
1953	38.1	101.2
1954	41.4	80.1
1955	45.3	106.2
1956	48.7	104.5
1957	51.2	102.3
1958	54.9	77.3
1959	59.95	84.8
1960	65.3	90.1
1961 (plan)	71.3	...

And steel output is a most important indicator of the economic might of a country and the level of development of its productive forces.

It has already become a normal feature for the United States — and this is pointed out in the Statement of the Moscow Meeting of Representatives of the Communist and Workers' Parties — that the rate of growth of production barely exceeds the growth of population. In the Soviet Union, production is growing 5 to 6 times more rapidly than population.

Dynamics of Industrial Production and Population Growth in the USSR and the USA (in % of 1957)

	USSR		USA	
Year	Industrial production	Population growth	Industrial production	Population growth
1957	100	100	100	100
1958	110	101.8	93	101.7
1959	122	103.6	105	103.4
1960	134	105.6	107	105.4

hty years ago the United States emerged in place in the volume of industrial production, has since maintained a considerable edge on her capitalist countries. Only a socialist ry could set itself and successfully tackle the task of reaching the American level of industrial production. The feasibility of this task is no longer called in question by many bourgeois economists, although they consider that this will take more time than we in the Soviet Union think necessary.

But what they fail to understand is that to overfulfill their plans has become a rule with the Soviet people. That is why their victory in the economic competition is coming ever closer.

For an Abundance of Foodstuffs

In 1958, on the eve of the 21st Congress of the Party, the volume of agricultural production in the USSR amounted to approximately 75 to 80% of the US level. The total and per capita production of wheat, rye, barley, potatoes, flax, sunflower seed, sugar beet and wool in the USSR was then and is now higher than in the USA. The USSR, however, is still behind the USA in the total harvest of grain crops and cotton, and in the output of meat, eggs, fruits and vegetables.

In order to reach and exceed the American per capita level in the output of all agricultural products, their production in the USSR must exceed that of the USA by 18 to 20%. This task will be fully solved with the fulfillment of the Seven-Year Plan.

During the 1953 to 1960 period our country considerably increased the volume of agricultural production. We have never experienced such high rates of growth of agricultural production as during the past seven years. They considerably exceed the US rates of growth.

Increase in Agricultural Production in the USSR and USA, 1953 to 1960
(1960 in % of 1953)

	USSR	USA
Grains	161	137
Sugar beet	246	136
Meat	150	115
Milk	169	105
Butter	171	89

This superiority in rates of growth has made it possible for the Soviet Union to considerably alter the relationship between the USSR and the USA in the output of major foodstuffs.

Volume of Agricultural Production in the USSR
(in % of USA level taken as 100)

	1953	1960
Grain crops	58	68
Sugar beet	212	382
Meat	39	51
Milk	67	108
Butter	68	127

Grain production in the USSR is behind that o the USA first of all in the output of corn. The i plementation of the resolution of the January P ary Meeting of the CPSU Central Committee on panding the area under corn in the Ukraine, the RSFSR, Moldavia and Georgia with the aim of p ducing not less than 50 centners per hectare, w make it possible to considerably narrow the gap between us and the USA in the production of gra crops and will greatly increase the country's fo der supply.

The USSR has exceeded the US level in the to and per capita production of butter. In 1960 the per capita production of butter in the USA was kg.; in the USSR it was 4 kg.

As for total milk production, the USSR has ex ceeded the US level but is still behind in per ca production. This lag can and should be overcon within the next year or two.

The USSR lags behind the USA above all in th production of meat per capita. During the past seven years per capita meat production in the USSR has increased from 31 to 42 kg. It has ou stripped by far such countries as Italy (24 kg. p capita), Finland (32 kg.) and Norway (34 kg.). H ever, it still lags behind the USA which produce 98 kg. per capita.

The January Plenary Meeting of the CPSU Ce tral Committee posed the task of sharply steppi up the production of grain, industrial crops, po tatoes and vegetables, meat, milk and other pro ucts during the current year. "The interests o building communism and achieving a steady ris in the people's living standards," the resolution the Plenary Meeting reads, "today calls for new and still higher rates of growth in agriculture. The task is to make agricultural output always pace popular demand."

Although the USSR is still behind the USA in t volume of agricultural production, the paths of agricultural development in the USSR and the U are profoundly and basically different.

In the Soviet Union the people, the state and t Party are concerned with one problem; what should be done to utilize the great advantages i herent in socialist agriculture, to increase pro duction and to flood the country with foodstuffs. is pointed out in the resolution of the Plenary Meeting of the CPSU Central Committee that "w shall not have a prospering socialist economy w out a well developed agriculture, without an abu dance of agricultural products. The effort to steadily advance agriculture is a prime conditi for building a communist society. It is truly th concern of the entire people."

Today, when the results of the January Plena

ing of the CPSU Central Committee are being
ssed throughout the country, collective farm-
nd state farm workers once more are check-
heir possibilities, finding new reserves for
er development, and deciding the tasks to be
ed. This nation-wide movement is the best
ntee that the resolution of the Plenary Meet-
ill be fulfilled within a short period. The
is not far off when our socialist agriculture
eave the USA behind both in the total volume
oduction and in per capita output.
eaking at the Plenary Meeting of the Central
nittee of the Communist Party of the Ukraine,
Khrushchev pointed to the enormous re-
es the republic possessed for a rapid growth
ricultural production and expressed confidence
hese reserves would be put into effect. "Right
as the Party criticizes the shortcomings that
appeared in the development of agriculture,"
Khrushchev said, "we confidently declare that
vorks as it should, the Ukraine can overtake
rica in per capita meat output in two to three
, or in four years at most. ... When you feel
own strength, when you yourselves are con-
d and convince your comrades, inspire and
ize the people and work with a will, you will
inly be able to successfully cope with this
"
d what are the American authorities concerned
'
ey are preoccupied with one thing; how to
the farmers to curtail production, to curtail
rea under cultivation, to decrease the cattle
ation; what to do with the stocks of agricul-
products which are now valued at 9 billion dol-
At the same time the incomes of farmers
dropped considerably. They are at present
elow the 1951 level. Annually some 100,000
ers are ruined, leave the land and move to the
where they replenish the ranks of those who
tilely looking for work and take their place in
or a plate of charity soup.
erican papers are full of reports of the terri-
ight of millions of unemployed, of many cases
ysical exhaustion of children due to malnutri-
And this at a time when millions upon mil-
of poods of foodstuffs lie in state warehouses
ears on end, with no market in sight.

owth of the People's Welfare Is Main Aim

e purpose of increasing production and labor
ctivity in the USSR is to raise the Soviet citi-
material and cultural standards. By the end
sixties the Soviet Union should surpass the
n per capita output. This will give the Soviet people a higher living standard than that in any other country, including the USA.

When one compares living standards one must not forget that in a capitalist society the "average level" is a rather relative concept. Bourgeois economists include in this "average" both the fabulous incomes of a handful of monopolists and the high salaries of their bootlickers on the one hand, and the earnings of the workers who now have, as President Kennedy put it, "less money to buy things which now cost them more" and "the incomes" of the millions of jobless on the brink of starvation on the other. All these marked contrasts in the material standards of the classes in capitalist society are glossed over by this "average." To realize its real menaing one could quote from old statisticians who used to say that the "cow drowned in a puddle, the average depth of which was 20 centimeters."

Today the population of the USSR is less well off in clothing, footwear and housing than the employed factory and office worker in the USA. The USSR is also behind the USA in the standard of consumption of meat, milk, eggs, and fruit.

Nevertheless the working people of the Soviet Union enjoy, as far as material standards are concerned, advantages over the working people of the USA and other capitalist countries which the latter can only dream of.

Every working man knows that material and cultural standards are steadily rising in the USSR, that today we are better off than yesterday, and that tomorrow we shall be still better off than today. This is a tremendous source of optimism, for every new day opens up new vistas and new bright prospects.

Look how much has been done for the Soviet people's benefit in the past two years of the Seven-Year Plan!

All factory and office workers have been transferred to a 6- and 7-hour day. The working week in the USSR averages 39.4 hours today. The wage adjustments which accompanied this process resulted in greater wages and salaries for a considerable number of employees, chiefly for those in the lower-paid categories. The gradual abolition of the income tax, begun last year, will result in the complete elimination of this tax by 1964. Mankind has never known anything like this in all its history!

The fact that there is no unemployment in the USSR and that all doors to science and production are open wide to young people is something we have long grown used to. But in the USA, according to the latest statistics, there are 5,500,000 unemployed and a still greater number of partially

unemployed. Every year more than a million young people reaching working age hunt in vain for jobs. Taxes and prices are going up while earnings are going down. All that the American working man hopes for is that tomorrow will be no worse than today. It is not because today is good, but because the prospects are gloomy. The stormclouds of a new crisis constantly threaten to deluge the country with more suffering and privation for those who work, let alone the jobless. There is nothing sadder than the lot of a man who realizes that society does not need him and that he cannot feed himself and his family.

With obstinacy worthy of a better cause, the bourgeois press is repeating the allegation that in the capitalist countries everyone has "equal opportunities" and that all can become millionaires. Ruthless reality is showing, however, that it is only the millions of the disinherited that are multiplying.

What can the bourgeois newspapers, journals and books compare with the following facts about life in the USSR? Full employment. Social insurance for all factory and office workers without exception. No discrimination in pay for reasons of seniority, sex, or color of skin. A state-paid 16-week maternity leave. State aid for unwed mothers. More nurseries, kindergartens and boarding schools every year. Free compulsory education for all children of school age. Free university and college education and scholarship stipends for practically the entire student body. More university and college students per 1,000 of the population than anywhere else. More engineers graduated in 1960 than the USA graduated in the last three years taken together. Some 20 million pensioners with nothing to worry about.

In the last few decades, thanks to medical achievements and rising cultural standards, infant mortality rates in many countries have dropped considerably, while the average expectation of life has gone up, as a result of which the age pattern of the population has changed greatly. The proportion of children and aged people, in other words, those who need medical help and care most, has increased.

With an eye to all this, the Soviet state has taken a number of measures to train more doctors. Today the USSR has 18 doctors for every 1,000 of the population, compared to the US figure of 12. This is not the only thing. Since the proportion of children and aged people is increasing the number of doctors for every 1,000 of the population must g every year. In the USSR the number of doctors increased by 29% in the last 9 years, while in th USA there has been no increase for many years now. One must also take into consideration the fact that in the USSR medical assistance is free, whereas in the USA it is very costly, being out o reach for the low-paid brackets and a considera burden on the American working man's budget.

Before the revolution our country had one of t highest death rates in the world. Quite an achie ment. Today it has the lowest, the most honora one.

Or take the rate of housing construction. In t last three years we have built more than 8.7 mi lion apartment units in the urban and rural area Meanwhile the USA has built only 4.1 million. Last year the USSR put up more than 14 apartm for every 1,000 of the population compared to th US figure of 7.6.

In the USSR the number of schoolteachers for every 1,000 of the population is growing while i the USA it is declining. In the USSR the number newspapers, magazines and books published for every 100 of the population is growing, while in USA it is either continuing at the same level or going down.

The Soviet system has proved for all the worl to see that it is incomparably better suited to satisfy all the increasingly complicated require ments of human society. The USSR is fashionin its own way of life, one that has no ostentatious tinsel and accords with human aspirations for g uine progress.

The rate of growth in national income is the b general indication of the degree to which the pe ple's material living standards are rising. Betw 1957 and 1960 Soviet national income increased 30%, the increase per capita being 24%. In the U the respective percentages were 7 and 4. In the last three years the growth of the per capita na tional income in the USA has averaged only one cent a year. A snail's pace!

These varying results reveal best of all the a vantages of the socialist system which asserts t human being's right to a decent life, opens up u precedented vistas for the blossoming of the co try's material and spiritual culture, guarantees the working people rising living standards and a vances society to communism.

Planovoe Khoziaistvo, No. 6,1960

IARKOV:

v Features in Organizing the Material Stimulation

Technical Progress

e improvement of existing economic stimuli he creation of new stimuli to the introduction w machinery and technology, to the compre- ive mechanization and automation of produc- are an integral part of the extensive program chnical progress drawn up by the Plenary ing of the Party Central Committee in June

e material incentive principle is a major eco- c instrument which must be fully utilized to lerate technical progress. The rates of tech- improvement of production are largely de- ined by the degree to which individual workers he entire personnel of plants are interested in ting these improvements.

e June Plenary Meeting of the Party Central mittee pointed out that inadequate use has made of the material incentive principle in ulating the workers, engineers and technicians terprises and building sites, and specialists of arch and designing organizations to develop echnology and rapidly introduce it in industry onstruction. Not infrequently the personnel of prises mastering new technology have found selves in a worse position insofar as remu- ion is concerned than workers of enterprises continued to produce obsolete goods. Spe- ts of research and designing organizations successfully solved major problems in im- ng machinery, technology and production, lly enjoyed no advantages in remuneration as ared with personnel who had contributed noth- ew for years.

vas pointed out at the Plenary Meeting that comings in planning, in the organization of accounting, in setting prices of new items and vering the costs of their development had be- a serious obstacle to the rapid introduction v machinery in production.

view of this, the Plenary Meeting of the Party al Committee set the task of working out a system of economic stimuli for industrial enterprises and building organizations to the introduction of new machinery and technology, the comprehensive mechanization of industry and construction, the automation of production, and also of providing greater material incentives for personnel in industry, construction, transport enterprises, and research and designing organizations in the matter of improving production equipment.

Greater material incentives can be provided by further improving the wage and premium systems for workers, engineers, technicians and other specialists engaged in the development and application of new equipment.

The creation of economic stimuli to technical progress requires the solution of a number of general problems related to the improvement of planning, price formation and financing, and granting broader rights to managerial personnel in using the resources of their own enterprise for technical improvements and the expansion of production.

In conformity with the decisions of the June Plenary Meeting of the Party Central Committee, a number of highly important measures are now being applied with the object of assuring greater material stimuli to the introduction and mastery of new machinery. The forms of remuneration and premium systems are being improved.

Until recently the main premium system for managerial, engineering and technical personnel consisted of premiums for the fulfillment and overfulfillment of production plans. This system played a positive role at a certain stage. However it was aimed chiefly at stimulating an improvement in the quantitative indices of operation. Qualitative indices (costs of production, labor productivity) at best were merely one of the conditions for receiving a premium. Insofar as plans and assignments for the application of new technical equipment were concerned, their fulfillment was

not generally taken into account. As a result, the personnel of enterprises which made important technical improvements in production and on this basis scored big achievements in raising labor productivity and reducing costs were in no better position than the personnel of enterprises in which cost plans were merely fulfilled, provided the quantitative indices were the same.

Under these conditions some plant managers did not approach the matter from the viewpoint of the general interests of the state and tried to minimize their assigned production plan and in this way assure themselves of big premiums. Overfulfillment of the plan was often achieved not through an increase of labor productivity but through the employment of additional workers.

The reorganization of the premium system for managerial, engineering and technical personnel, carried out at the end of 1959, eliminates these shortcomings.

The new premium system is designed to stimulate better technical and economic indices of operation on the basis of the maximum use of internal production reserves.

The basic index in the premium system is the cost of production. Premiums for summary output indices have been abolished in most industries. Moreover, fulfillment of the plan for new technology has been included for the first time among the obligatory conditions for the award of premiums in all branches, in addition to the fulfillment of the production plan and the assignments for deliveries and labor productivity. The premium regulations stipulate that if the plans for the introduction and mastery of new machinery, new technology and new lines of output, approved by higher organizations, are not fulfilled, no premiums are to be paid either to the managerial personnel or to the engineers and technicians directly responsible for this work. No premiums are to be paid to the managerial personnel of shops which failed to carry out their assignments in the mastery of new machinery.

Thus, by making the award of premiums dependent on the economic results of the plant's operation, the new premium system concentrates the efforts of the managerial and engineering personnel on the utilization of all the technical and organizational factors involved in the further growth of labor productivity and the reduction of production costs.

In addition to improving the system of premiums for the general economic results of production, a new system of premiums for technical improvement of production has been worked out in conformity with the decisions of the June Plenary Meeting of the Party Central Committee.

New regulations governing premiums for the velopment, manufacture and introduction of new machinery and technology, for the comprehensi mechanization and automation of production, de pending on the yield derived by the national eco omy, will be introduced in the near future. The regulations have been drawn up on the basis of experience of awarding premiums for the devel ment and introduction of new machinery in the chine-building industry and the extensive discu sion of these questions after the June Plenary Meeting of the Party Central Committee.

In contrast to the old regulations, the new on will apply to personnel in all industries and in c struction, transport, communications, research designing, technological, surveying and geologi prospecting organizations. Moreover, the rang of measures for which premiums will be award has been considerably extended.

In some of the branches of the national econo the range of work eligible for premiums can in clude:

in industry — the development and introducti of new, technically improved and economically cient machines, equipment, apparatus, instrum new types of raw materials, supplies and other articles, as well as the elaboration and introdu tion of highly efficient technological processes advanced methods of performing particular ope tions;

in construction — the development and introd tion of mechanized flow processes of assembly erection of houses and structures, the use of ne efficient building elements, as well as the deve ment and introduction of other efficient technol cal processes and methods of building and asse bly work; preparation of designs for new const tion projects and the technical reconstruction c plants which assure high effectiveness of capit investments;

in geological prospecting — the development introduction of new, highly efficient and advanc systems and methods of prospecting for miner

in transport and communications — the intro tion of technically improved and economically cient transport and communications facilities, chines, equipment and instruments, as well as elaboration and introduction of highly efficient methods of organizing freight and passenger tr fic and other jobs.

Premiums to personnel in industry, construc transport and communications enterprises, in logical prospecting, research and designing or ganizations will also be given for the electrific tion, comprehensive mechanization and automa of production, the modernization of operating

pment, as well as for the successful fulfillment
eoretical investigations and surveys.
study of the experience of applying the pre-
n regulations for the development and introduc-
of new machinery which were in force in the
hine-building industry in recent years now
es it possible to organize the entire system of
erial rewards for the technical improvement of
uction much more effectively and to eliminate
shortcomings of the old system.
ie big flaw in the old premium system was the
that, as a rule, the size of the premiums was
ixed when approving the annual plans for work
ew technology and the premiums paid in a num-
of cases did not correspond to the actual eco-
ic effectiveness of the measures applied.
re were many bureaucratic elements in the
tical application of the premium regulations;
economic councils, ministries and departments
yed the approval of premiums for the work ac-
plished; this reduced their stimulating effect.
number of cases premiums for the develop-
t of a new machine were paid to the workers
18 or 24 months after the work had been com-
ed. Premiums covered only measures included
ie state plan and did not extend to work con-
ed under the plans of designing and research
nizations. Managers of enterprises and or-
zations actually had neither the right nor the
urces to grant premiums to workers for carry-
out minor but effective technical improvements
in enterprises.
ie new premium system provides that the list
bs for the fulfillment of which a premium
ld be paid, and the amount of the premium
ed on a preliminary calculation of economic ef-
veness), are determined when the annual plan
ew technology is approved. The procedure for
ayment of premiums is simplified and simul-
ously strict responsibility for the prompt pay-
t of premiums is established. This will greatly
nce the stimulating role and effectiveness of
niums.
anagerial personnel of enterprises are granted
der rights in awarding premiums for technical
ovements in production made on the initiative
e workers themselves and not provided for in
eneral plans. Managers of enterprises have
eir disposal up to 25% of the total sum allotted
terprises and organizations for premiums.
rest of the money will be concentrated at the
omic councils, ministries and departments and
be spent on new technology measures which are
ided for in the plans they approve and which
f national economic importance.
contrast to the old system, funds for premiums for new technology measures will be allotted on the basis of definite percentages of the total payroll of an enterprise or organization and will be included in production costs. For production enterprises and organizations the following allotments are provided (in percentage of the total payroll for production personnel or personnel engaged in the main line of activity):

Branch	Allotment, in % of payroll
Machine-building and metal-working industry	1.0
Oil, gas, metallurgical, chemical, electrical, building materials, timber, paper and woodworking industries	0.5
Other branches of industry and construction	0.3
Transport, communications and geological prospecting	0.2

Allotments for the payment of premiums to personnel of research and designing organizations will range from 4 to 8% of their payroll and will be included in the cost estimates of these organizations.

The following amounts of premiums are established, depending on the yield to the national economy as a result of developing and applying new machinery and technological processes, as well as from the mechanization and automation of production. (See table shown on the top of the following page.)

For work on new technology and also for successful theoretical investigations and surveys, when it is not possible to ascertain the economic yield, the premium may be paid in an amount up to 20% of the planned payroll calculated on the basis of the salary rates of the people engaged in this work.

The range of persons eligible for premiums for the technical improvement of production has been defined more precisely in the new regulations than in the old ones in the machine-building industry. No premiums may be awarded to persons who did not take part in the development and introduction of new machinery. Premiums may be paid to workers, managerial, engineering and technical personnel and other specialists in enterprises in industry, construction, transport, communications, research organizations (including research

Annual Economic Yield (in rubles)	Size of Premium in % of Annual Economic Yield
Up to 100,000	Up to 25%, but not more than 20,000 rubles
From 100,000 to 200,000	Up to 20%, " " " " 35,000 "
From 200,000 to 500,000	Up to 17%, " " " " 60,000 "
From 500,000 to 1 million	Up to 12%, " " " " 100,000 "
From 1 million to 5 million	Up to 10%, " " " " 350,000 "
From 5 million to 20 million	Up to 7%, " " " " 800,000 "
From 20 million to 50 million	Up to 4%, " " " " 1.5 million rubles
More than 50 million	Up to 3%, " " " " 2 million "

organizations of universities and colleges), and designing and geological prospecting organizations taking a direct part in the development and introduction of new equipment. Not more than 10% of the total sum of premiums may be awarded to other workers in these enterprises and organizations if they actively assist in the prompt fulfillment of assignments for the development and introduction of new machinery. The heads and chief engineers of enterprises and organizations will receive premiums for the fulfillment of the new technology plan.

To enhance the stimulating role of premiums and in view of the special importance now attached to the development and early introduction of new technology in all branches of the economy, premiums for the development and introduction of new technology may be paid over and above the maximum amounts fixed by the regulations on premiums for current results in production. At the same time, the total sum of premiums received in one year by an executive, engineer or technician for the development and introduction of new technology must not exceed six times their monthly salary rates in the machine-building industry and in research and designing organizations. A maximum of three times the monthly salary rate (within a year) is fixed for many other industries and also in construction, geological prospecting, transport and communications. However, the economic councils, ministries and departments of the USSR have the right, in certain cases, to permit enterprises in these branches to raise to six times the monthly salary rates the maximum premiums for fulfilling major assignments in developing and introducing new technology of nation-wide significance and included in the national economic plan.

Workers who participate in the development and introduction of new technology may also be paid premiums in excess of the maximum premiums established for the respective industries and trades, in amounts up to three times their monthly basic wages (within a year).

Simultaneously, changes are to be introduced the existing systems of remuneration for worke and engineering and technical personnel employ in the production of new equipment. Experience has shown that under the existing wage system, mastering the manufacture of new items frequen ly places them in a worse position than personn not engaged in mastering new items. This appli in the first place to the machine-building indust where the change-over to new models is effecte systematically and on a large scale. During the period in which the manufacture of new models being mastered the personnel of shops or entire plants work very intensively, while the economi indices of current operations may temporarily decline. To eliminate this contradiction a provision is made in the case of personnel in plant (shops and sections) of the machine-building industry who are mastering new, improved model allowing the management to raise the amount of premiums for the fulfillment and overfulfillmen cost reduction plans, and for the overfulfillmen output plans, in conformity with the existing re lations by up to 50% of the calculated sum, depending on the share of new output in the total v ume of production for the period set by the plan mastering the new models. The maximum amo of individual premiums for these indices has be left unchanged.

Since the elaboration of technically substantiated output norms for the period of mastering technology is inexpedient, managers of enterpri and organizations are permitted, upon agreeme with the factory or office trade union committe to transfer the personnel for the period of the i troduction and mastery of new technology, but f not more than six months, to a time wage-plus-premium system, applying to them the basic wa rates of piece workers and awarding premiums to 40% of their basic rates for high quality wor and pre-schedule fulfillment of assignments.

promote technical progress we must quickly order the system of remunerating designers, ologists and scientists employed in research signing organizations and at industrial enter-. The importance of adjusting the remunera-ystem for these categories of personnel is nined by the special role they play in the cal improvement of production. The task is act, through the proper system of remunera-he most competent designers, technologists ientists to sectors that are decisive for the uation of technical progress.

his day there are shortcomings in the re-ation of these specialists. Different salaries id for the fulfillment of the same jobs at re-n and designing organizations and industrial rises. Those who have a scientific degree e employed at industrial enterprises receive er salaries than those working in research signing organizations, which limits the possi-of enlisting highly qualified scientific person-r work directly in industry. It is of great im-ce in this connection to put in order the re-ation system in the machine-building industry. in working out the salary scales for engi-g and technical personnel, designing engi-have been placed in a separate group. Their es are differentiated in three categories. alary of a designing engineer of the third, the category, is set at the same level as the of a senior engineer of the general special-This will promote better distribution of en-ing personnel within enterprises and among rises.

special enterprise fund is of great impor-for the economic stimulation of improvements production and economic activities of the en-ersonnel of the enterprise. This fund is made allotments from planned profits and profits plan, or from savings on production costs, spent chiefly on improving the material and al conditions of the enterprise personnel. the procedure in force until recently for g allotments to the enterprise fund did not nto account the level of technology, the vol-f new output at an enterprise, and did not pro-ne necessary advantages to plants introducing achinery and mastering the manufacture of ems. On the contrary, such plants often themselves at a disadvantage. The size of ents to the enterprise fund are not sufficient-rdinated with the maximum amount of this in some cases mere plan fulfillment was n to assure the maximum which an enterprise assign to this fund.

iew of this, some changes are now being made in the system of accumulating and spending the enterprise fund. To increase the interest of the personnel of machine-building plants in the early mastery of the manufacture of new models, the maximum amount of the allotment to the enterprise fund, depending on the share of new items in total output, is raised from 5 to 7% of the total payroll for production personnel; if new output constitutes up to 10% of the total the maximum allotment to the fund is raised to 6% of the payroll; if the share of new output is not less than 15%, the allotment is raised to 6.5%; and if it is not less than 25%, the allotment goes up to 7%. In other industries the maximum allotment to the fund is raised to 5.5%. Allotments to the fund from above-plan profits are increased by 10%. In the first year of serial production of new machinery at machine-building plants the allotments to the enterprise fund are made in the amount of 10% of the planned profits.

Lately the enterprise fund has practically lost its importance as a source of outlays for the technical improvement of production. More than that, expenses for these measures were placed under the same heading as expenses on housing. The new procedure for the use of the enterprise fund provides for the following distribution of the money:

Measures for new technology, modernization of equipment and expansion of production	Not less than 20%
Building of houses and cultural and service establishments, repair of houses	Not less than 40%
Payment of individual premiums, improvement of cultural and other services for the personnel, provision of sanatoria and rest home accommodations and the rendering of aid	Up to 40%

The new system of forming and spending the enterprise fund will promote the initiative and independence of enterprises as regards technical improvement of production and will stimulate the collective interest of the personnel in introducing and mastering new technology.

In addition to enhancing the personal material interest of the personnel in the technical improvement of production and perfecting the system of forming and spending the enterprise fund, economic stimulation of technical progress covers a wide range of questions and requires further improvements in planning, price formation, financing and

other measures associated with creating the general economic conditions for the swiftest possible introduction and mastery of new technology.

It was pointed out at the Plenary Meeting of the Party Central Committee in June 1959 that in determining the planned assignments for industrial enterprises and building sites the State Planning Committees of the Union Republics and the economic councils frequently did not take into account the costs involved in mastering the manufacture of new models of equipment, machines, building components and articles, in the building and operation of pilot plants and shops, as well as in experimental construction. They did not assign the necessary material resources for these purposes, all of which negatively affected the economic indices of industrial enterprises and building organizations.

The additional outlays connected with preparations for the manufacture of new machinery are now usually charged to the cost of production of the new output, which under the existing system of setting prices of new items frequently reduces the profitability of production at the enterprises mastering the new lines and makes their production economically disadvantageous. As a result, enterprise personnel are not interested in undertaking the manufacture of new machinery, equipment, apparatus and other new goods. Moreover, the high prices of new items in the period of the mastery of their manufacture hamper their introduction at enterprises using these items.

To stimulate the manufacture and introduction of new equipment it is necessary to create conditions which will not only compensate for the outlays involved in organizing the production of new equipment, but will ensure a rate of profit no less than on already mastered items. For enterprises manufacturing new goods, prices should be set with due regard for the expenses involved in mastering their production; otherwise the enterprises will not be interested in their mastery and production. On the other hand, for enterprises consuming the new items, prices must not exceed the prices of similar old items, with account taken of their particular properties; to stimulate their early introduction, their prices should be even somewhat lower.

Measures have been drawn up to establish a new procedure for covering the expenses involved in mastering new machinery. They will be applied first of all in the machine-building industry. It is planned to set up a fund for the mastery of new technology in the economic councils, ministries and departments of the USSR which have machine-building and metalworking plants under their jurisdiction. This fund will be made up of contributions by enterprises charged against their production costs and will be used to cover outlays on pre- paring the manufacture of new models of equipn It will be used to cover all planned expenses of enterprises for designing, experimental and oth jobs involved in preparing for the manufacture new items by the machine-building and metalwo ing industry prior to their serial production, in cluding the manufacture of the initial set of spe tools and fixtures, as well as the first experim model, or the first series, the first lot of the n items.

If necessary, this procedure for covering out will be applied to particular sectors of other in tries in which the manufacture of new equipmer involves substantial expenses.

Temporary wholesale prices of new items in machine-building and metalworking industry wi set on the basis of the existing wholesale price old items similar in design or purpose, with an justment for the higher productivity and other t nical and economic advantages for users of the items (reduction of production costs, improvem of quality of the manufactured items, easier wo ing conditions).

On fundamentally new items manufactured by machine-building and metalworking industry, fo which there are no analogous old models, temp rary wholesale prices will be set on the basis of planned production costs (without including in t the outlays which have to be covered from the f for the mastery of new technology) and a profit rate of up to 5%.

The new procedure for covering outlays for t manufacture of new equipment and the fixing of prices, as well as the formation of a fund for th mastery of new technology will be put into oper tion as of January 1, 1961.

The experience acquired in applying the new procedure for covering outlays on the mastery new items and the setting of prices for them wi undoubtedly suggest ways of improving the enti system of economic stimuli to the manufacture introduction of new technology. In conformity this, changes will have to be made in the syste of planning the entire range of measures assoc with the introduction of new technology. In pla production and the indices of plan fulfillment, count should be taken of progressive changes i structure of production, the degree of renewal the produced output, the technical level of prod tion, etc. We must examine and critically anal to what extent the existing indices of the volum production, costs of production, labor producti and the technical level of production promote t realization of the tasks set by the June Plenary Meeting of the Party Central Committee and th

ures currently being carried out. The entire
n of material stimuli both of individual work-
nd entire enterprises should be subordinated
solution of one of the cardinal tasks of
communist construction at the present stage — raising the technical basis of socialist production to a qualitatively new level, building the material and technical basis of communism.

Planovoe Khoziaistvo, No. 8, 1960

OSIACHENKO:

ater Material Incentives and Technological Progress

21st Congress of the CPSU has adopted a program for the further development of our ry's productive forces and for achieving a of production, a degree of mechanization and ation, and a growth of labor productivity will enable our country to considerably raise ell-being of the people and make a decisive n building up the material and technical base mmunism in the current Seven-Year Plan. umming up the results of the work of fulfill- e decisions of the 21st Party Congress the 1960) Plenary Meeting of the Party Central ittee once again pointed out the fact that the problem of the current Seven-Year Plan — maximum time in the peaceful economic tition between socialism and capitalism — be solved only through accelerating in every le way the rate of technological progress and s basis the growth of labor productivity. In for this task to be accomplished successfully ecessary to tap all the reserves and poten- es of our economy." As the decision of the ry Meeting indicated, main attention "should ncentrated on raising the productivity of so- bor in every possible way."

ccomplish these great tasks we must make st effective use of all the material and moral i to expand socialist production on the basis anced technology; we must develop and then all kinds of material incentives in order r technological progress and the productivity ial labor. The concrete forms and methods ialist distribution should be subordinated to fillment of these production tasks. Lenin's that "distribution is a method, a tool, a for raising output" (1) has not lost its sig- ce in the period of the comprehensive build- communism.

In his report on the target figures for the development of the national economy of the USSR for 1959 to 1965 Comrade N. S. Khrushchev indicated that the satisfaction of individual needs "should take place not only through higher wages, but also through public funds whose role and importance will steadily increase." At the same time he pointed to the need for strengthening the principle of material incentives in every way. "At the present stage," he said, "the main yardstick for the share each one receives from society when products are distributed is labor, its quantity and quality," simultaneously indicating that "the overwhelming part of the material and cultural benefits is distributed among the members of society depending on their contribution of social production."

Our press at times has failed to elucidate with due clarity the question of the change in the relationship between the various forms of distribution which is to take place in the immediate future: between distribution in accordance with the quantity and quality of expended labor on the one hand, and free distribution of material and cultural benefits from public funds on the other, that is, irrespective of the labor contributed by each individual worker. There have been statements to the effect that free distribution from public funds should be "the main way of raising the well-being of the people" at the present stage of our development. Of course, the significance of free distribution will gradually increase, but this method cannot be considered as the main way of raising the well-being of the people at the present stage. Even more unsound is the view that in the immediate future the wage fund should grow only to the extent that the number of factory and office workers increases, whereas practically the whole increment in the material resources of consumption should be

used chiefly to enlarge public funds and extend free distribution. This view in effect implies that in the next few years wages will begin to lose their significance as the most important incentive to raising labor productivity.

Extending free distribution means, of course, that the aggregate real income of the working people will grow and in this sense it will constitute a material stimulus promoting the growth of social production. However, this should by no means weaken the principle of distribution in accordance with the quantity and quality of labor expended by each individual worker. Stimulating each worker is achieved, above all, through raising his wages in accordance with the growth of his labor productivity.

The socialist principle of distribution will not only remain valid for the immediate future but will be strengthened in every way, and the concrete forms of distribution in accordance with labor will be systematically improved so as to enhance their role as a most important economic factor in stimulating the development of the production forces. This means that the incomes of factory and office workers will grow not only through a considerable extension of free services and benefits but, above all, through higher wages, which constitute the principal form of distribution at the present stage of communist construction.

The forms of free distribution from the public consumption funds are elements of the future communist distribution. But they have appeared and are developing at the socialist stage of communist society, on the basis of socialist principles of production and distribution; that is why their concrete forms, levels and norms are determined by the current level of production and remuneration in accordance with labor, i.e., by the socialist principle of distribution, the main and governing principle for our society today.

The socialist law of distribution in accordance with labor is a specific form of combining collective and personal interests; it corresponds to a given level of development of the productive forces and the degree of maturity of direct social labor. The interests of society are ensured here through stimulating the individual; production tasks are accomplished through providing material incentives for the individual worker as well as the collective of workers (for instance, allocations to the enterprise fund).

The interests of society and the individual are not in conflict, nor are they identical, as some people maintain in asserting that there is no contradiction between the product for society and the product for the individual. Social ownership of means of production creates a community of social and pe sonal interests; this is expressed in the fact tha the greater the social wealth the higher the mat rial and cultural standards of the working peopl However, this is achieved neither automatically nor directly; it is realized through the socialist principle of distribution, i.e., through personal centives. But when personal income becomes a detached part of the social income there is still opportunity for deriving personal benefits at the expense of society. Such phenomena still occur. In certain cases, for instance, people try to sec for themselves easy assignments under the plan with a view to overfulfilling them considerably order to win high bonuses. There are also case of overfulfilling the plan by arbitrarily changing the assortment of goods, using understated outp norms, employing various kinds of padding when the fulfillment of output norms is assessed, etc. That is why strict state control over the measur of labor and the measure of consumption is an o jective economic necessity at the socialist stage of society.

A correct combination of the interests of society and the individual implies the use of such crete forms of material stimulation as will best correspond to the interests of developing the pr ductive forces and will help to accomplish the h toric tasks confronting socialist society, above that of creating the material and technical base communism.

The socialist principle of distribution and con trol over the measure of labor and the measure consumption is realized, as we know, with the h of commodity-money forms which are used in th interests of building a communist society. The perience of socialist construction has confirmed that the socialist principle of distribution in accordance with labor, as well as the other econo laws of socialism, can be fully and consistently implemented only through commodity-money ins ments. New content reveals itself through the u of old forms, and through old forms a new form developed — one which corresponds to the new tent. This new form, inherent in direct social labor, is the direct assessment and distribution social labor in its natural form — in units of wo ing time. But this will be a distinctive feature the higher phase of communism, with the produ tive forces, the culture and communist conscious ness of the individual so developed that the need for personal material incentives will disappear. However, until then it will be necessary to impr in every way the concrete value forms or instru ments which are used to exercise control over measure of labor and the measure of consumpti

ince the methods of economic management and concrete forms of material stimulation in a so-list society are linked in one way or another with mmodity-money forms, the most important con-eration is finding the ways of improving such ue forms as wages, the bonus system, production ts, prices and methods of planning them, cost ounting, the methods of assessing the results of operations of enterprises, and ways of en-raging the collectives of the enterprises to work the achievement of the best production indices eation of the enterprise fund and its utilization). must also consider ways of improving the meth-of budgetary allocations, credit and financial trol. As for collective farm development, im-tant consideration must be given to the question mproving the concrete forms of assessing pro-tion costs and distribution, particularly forms naterial incentives in accordance with the social-principle of distribution.

'he decision of the July (1960) Plenary Meeting he Party Central Committee pointed out that "it ecessary to make fuller use of such economic ers as cost accounting, profit rates, prices, fits and financial control."

'he forms of material stimulation, the system methods of their implementation are not im-table. They should be constantly improved and nged to meet the concrete conditions and his-ic tasks at each stage of communist construction. s is vital for accomplishing production tasks , hence, for ensuring our rapid movement to-d communism. Only those forms and methods listribution and material stimulation are pro-ssive, which under the given historical condi-s best meet the requirements of the develop-t of the productive forces, namely, increasing or productivity and the growth and improvement ocial production.

ut at each stage of our development conditions nge and, naturally, a particular form which was ified and necessary at one time, proves insuffi-t under the new conditions, and therefore re-es change and improvement, or simply outlives lf and becomes an obstacle. The need then es for new forms, new means and methods of ulation, for new combinations of individual and ective incentives, and for new relationships be-en material and moral stimuli to ensure our de-pment, etc. The experience of communist con-ction confirms this most convincingly at every of the way, particularly during the last few rs.

ake, for instance, the principal form of so-ist distribution at state enterprises — wages the wage scales. During the First Five-Year Plan when the shortage of skilled labor was particularly acute there was a need to sharply differentiate the remuneration of labor. Today, when we have built a powerful industry, trained plenty of highly skilled workers and collective farmers, and raised the culture and technical level of the working people, the need for such differentiation has disappeared. The wage scale in the machine-building industry introduced in the early 1930's established wage rate extremes of 3.6:1. At present, in the period of comprehensive communist construction when the difference between the levels of skill is diminishing, such a gap is no longer permissible because it would run counter to the practical tasks of communist construction.

In the period of building the material and technical base of communism, of mechanization and automation of all branches of the national economy, a growth in the quantity of technical equipment per worker is occurring everywhere and simple labor is being replaced by skilled labor. Integrated mechanization and automation are raising all workers to the level of highly skilled personnel applying profound technical knowledge in production. Because of this the differences between the various grades of labor are now gradually diminishing and will ultimately level out; this, in turn, calls for reducing differences in wages. It should also be borne in mind that in a socialist society training and education are provided at government expense, i.e., free of charge. Hence, there should be no great differences in the wages of workers of different categories of skill.

The new wage scales which are being introduced in connection with the current adjustment of wages considerably reduce the differences between the basic wage rates of the different skill categories. For instance, in the machine-building industry a wage scale of six categories is being introduced, the ratio between the first and the sixth categories being 1:2, which means that the basic wages as well as the level of earnings for the workers in the lower skill categories will be considerably raised.

At the same time, increasing the share of basic wage rates in the total earnings of the workers makes it possible to adjust the setting of output norms and, hence, more rationally to coordinate the growth of average wages with labor productivity. The role of wages in stimulating increases in labor productivity should be a permanently operating factor of steadily increasing importance. Only the maintenance of a definite relationship between the growth of wages and the results of labor makes it possible to use wages in raising labor productivity. The direct interest of the workers in raising the productivity of social labor, as the

material foundation for a steady improvement in their material and cultural standards, constitutes one of the great advantages of socialism as compared with capitalism.

Decreasing the differences between skill categories in the basic wage scales is also directly related to another task set by the Party — raising the level of incomes of the lower-paid factory and office workers to that of the higher-paid, which in turn follows from the whole set of programmatic measures taken by the Party to create the conditions for the gradual transition to the higher phase of communism. The closer we approach communist distribution the greater will be the significance attached not only to the growth of average wages, but also to raising the minimum wage to a certain level, with due consideration for the fact that an increasing portion of the poople's needs will be satisfied out of the social funds free of charge. The manner in which taxes are presently being abolished is an additional means of reducing differences between the minimum and maximum wages.

By raising the wages of the lower-paid brackets and ensuring the development of social forms to satisfy the people's needs, the contradiction between the identical relationship of the working people toward the means of production and a certain inequality in the distribution of material benefits will gradually be resolved, this contradiction being inherent in the first phase of communism.

It is not sufficient merely to declare that inequality in distribution is objectively inevitable in the first phase of communism. The degree of this inequality is also important, an inequality which is not arbitrarily established but is determined by the interests of the development of the productive forces. In other words, the differences in wage levels between the various categories of workers should be such as is called for by the interests of the development of the productive forces, the acceleration of technological progress and the advancement of science. At the same time as we draw closer to the higher phase of communism, differences in remuneration must steadily decrease, for the historical development of socialism creates the objective conditions for the complete abolition of all differences in distribution.

In the period of the comprehensive building of a communist society moral stimuli to expanding output on the basis of technological progress acquire ever increasing importance. A vivid illustration is the young but vigorous movement of shock workers and communist labor teams — the embodiment of all the best that has been achieved as a result of the preceding development of socialist emulation. As N. S. Khrushchev put it, "the distinguishing feature of this movement of innovators consists i the fact that they combine most successfully the struggle for higher labor productivity with persistent efforts to raise their level of knowledge a to develop communist features in labor and in lif The motto of this movement is — study, live and work in the communist fashion!" (2) These and similar moral stimuli, far from excluding the socialist principle of material incentives, imply its further strengthening. Material and moral stimu should complement one another.

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The use of material and moral incentives to stimulate the development of new technology is o special importance at present. This follows fro the specific features of the current stage of communist construction. The objective is not merely to extend mechanization and automation of labor on the basis of the present level of technological development, but to create and introduce new and more advanced technology which constitutes the main content of the material and technical base o communism.

One of the most important indicators of the ne and powerful advance of the productive forces is technological progress: completion of the electri fication of the entire national economy and, on th basis, the introduction of comprehensive automation of production, the development of automatic systems of machines with the use of electrical equipment, as well as of the most complex automatic control devices, and the completion of integrated mechanization of all branches of the natio economy. New equipment will be introduced all t more successfully the greater is the encouragement given to the creative initiative of the masse aimed at improving production technology, maste ing new and advanced types of machinery and goo and ensuring the maximum utilization of reserve for the growth of output and labor productivity. The objective is to direct all the factors and mea of material and moral incentives, all forms and methods of encouraging the local initiative and production activity of the working masses toward accomplishing the main task of the current stage of communist construction — ensuring accelerate technological progress in all branches of the national economy.

Much has been done in this sphere in the last few years. The reports of the Councils of Ministers of several Union Republics and economic co cils to the July (1960) Plenary Meeting of the Par Central Committee reveal that outstanding achie ments have been made in the last few years in na tional economic development and in the introduction of new technology in many of economic

ches. At the same time, the Plenary Meeting ed to the tremendous reserves available and rganizational shortcomings in tapping these rves. Many of the economic councils and enter- es fail to carry out their plans in designing and ducing new equipment. "The plans for intro- g new machinery and technological processes as a rule, drawn up only after the production s have been worked out, and as a result the plan nments fail to consider the opportunities ed by the introduction of the latest achieve- s of science and technology for increasing pro- on and improving qualitative indices. In many s the plans for new equipment are not substan- d by the necessary data — by technical re- ces."

this connection the government's decision on rocedure for drawing up the national economic for 1961 is of tremendous importance, for it olishes that before the production plans are ed out the measures on the development and duction of new technology in the national econ- must be prepared; these measures should in- e the designing of improved machinery, equip- and other items which should be put into uction. The drawing up of plans should also be eded by the elaboration of measures on the ialization and coordination of enterprises, as as on the mechanization and automation of pro- on processes and the introduction of advanced nology in production. This decision is aimed at ng fuller use of the achievements of science echnology, as well as of the experience of the ng enterprises, at making the production plans e rational from the point of view of technology, ensuring better coordination between the plan he development of new machinery and the other ons of the national economic plan.

is decision has been strengthened by other sures taken by the Party and government — for nce, the improvement of the current bonus sys- and other forms of material rewards.

nin attached great importance to bonuses as f the major forms of material rewards for ers who helped to raise the productivity of so- st labor. The bonus, he said, "is an institution n is among the most important as far as its in socialist construction is concerned." (3) 1959 new bonus systems were introduced in try. They provide bonuses for lowering pro- on costs, and in some branches, for improved ty of goods; in other words the emphasis is d on the qualitative indices of growth of out- Although the new systems do not solve the em of bonuses for the development and intro- on of new machinery, they nevertheless considerably raise the role of bonuses in stimulating the fulfillment of such an aggregate index of the qualitative improvement of output as the lowering of production costs. At the same time the new systems have eliminated extravagances in the size of bonuses.

Of no small importance is the decision of the Party Central Committee and the USSR Council of Ministers of May 20, 1960, on measures for the better utilization of inventions and rationalization proposals. The decisions of the 21st Congress and the June (1959) Plenary Meeting of the Party Central Committee on the acceleration of technological progress have evoked a new wave of creative activity on the part of inventors, rationalizers and innovators in production. This is vividly expressed in the constantly increasing number of proposals coming from the workers of all branches of the national economy. The introduction of these proposals helps to advance production and to promote higher labor productivity.

However, the state of affairs with regard to the utilization of inventions and rationalization proposals is still unsatisfactory. In the last two years 25,400 inventors' certificates were issued, whereas only 4,600 inventions were introduced in the national economy. Many rationalization proposals have not been implemented either. In order to radically improve this state of affairs it has been decided to include inventions (in accordance with their relative importance) in the state national economic plan, the plans of the Union Republics, the plans of the economic councils, and the plans of enterprises and construction sites, with the necessary funds and material resources being allocated for this purpose. Rationalization proposals will be included in the plans of the economic councils, enterprises and construction sites. In this way the inventions and rationalization proposals which have been earmarked for implementation will become a component part of the section of the production plan which deals with new machinery. Further, executives will be held responsible for the application of these inventions and rationalization proposals, just as they are for the fulfillment of the other assignments of the national economic plan.

Credit is an important factor in the economic stimulation of technological progress. As we know, the principal measures for the reconstruction of enterprises, the introduction of new machinery, the mechanization and improvement of technology are carried out by means of planned capital investments. Allocations for these purposes are made out of both budgetary resources and the funds of the enterprises themselves — outlays to cover depreciation, and that part of profit

which remains at the disposal of the enterprise. As a subsidiary, additional source, the credit form of capital investments can also be used for this purpose. The period for which credit is granted and the terms of repayment are incorporated in the entire system of cost accounting; credit provides the opportunity for establishing financial control over the effectiveness of the contemplated technological improvement, the selection of objectives to be scheduled for capital reconstruction, the establishment of reasonable time limits for the commissioning of projects, and the period of recoupment of expenses covered by the credit.

Up to 1955 the State Bank granted credit for the mechanization of production only to a relatively small number of enterprises, mainly to those in the light and food industries, and for no longer than a term of one year. Later decisions increased the number of enterprises which were granted bank credit; the size of the credit per undertaking was likewise increased, together with the term for which the credit was granted.

At present the State Bank grants credit to cover the costs of introducing new machinery for a term of up to two years. To a number of the more important branches, such as metallurgy, the coal, oil, chemical, machine-building, building materials, and textile industries credit is made available for a period of up to three years on condition that these expenses are fully recouped from the economies derived from the reduction of production costs, resulting from the measures covered by credit.

In 1959 the bank credit allocated to cover the costs of introducing new machinery, mechanization of production and improvement of technology ran to more than 4 billion rubles. In other words, as compared with 1954 there was a 13-fold increase. However in a number of cases the credit is not being used for the proper purpose; some of the enterprises fail to allocate materials and equipment required for the implementation of the measures covered by bank credit and, as a result, the time-limits are prolonged, thereby decreasing the effectiveness of these measures. The offices of the State Bank and Construction Bank granting credit to cover the costs of introducing the new equipment should strengthen their control over the economic practicability of these measures, as well as over the observance of the time-limits set for these measures.

Apart from the above measures designed to stimulate the introduction of new technology the Central Committee of the Party and the USSR Council of Ministers, in pursuance of the decision of the June (1959) Plenary Meeting of the Party Central Committee, adopted a comprehensive decision, "On the Economic Stimulation of Enterprises and Raising Material Incentives for the Workers in t Development and Introduction of New Equipment and Technology, and in Comprehensive Mechaniz tion and Automation of Production."

Increased economic stimuli for enterprises ar construction sites will be applied in the followin manner:

First, there will be a new system for building up and utilizing the enterprise fund. The previo system failed to provide advantages for enterpri which produced new and technically more advanc goods. Moreover, since the enterprise fund is built up by deducting a certain percentage of plann and above-plan profits, the enterprise which beg to produce new items and was burdened with con siderable expenses, particularly at the outset, w in a less favorable position, as a rule, compared with the enterprises which avoided manufacturin new machines and continued to produce the long approved, though outdated, but highly profitable goods, thereby securing high profits and large a locations to its enterprise fund. Such "encourag ment" of the backward enterprises to the disad- vantage of the more advanced could not help but have a negative effect on the latter and weakened their interest in mastering the output of new ma chines.

In order to eliminate this unfair practice it ha been established that machine-building enterpri will allocate to their enterprise fund, from plann profits derived from the production of new ma- chines (in the course of the first year of the iter serial production), 10% instead of the usual 4%. upper limit of the percentage of the annual payr to be allocated to the enterprise fund has been raised depending on the share of the new machin in the total output of the enterprise. All branch of industry will be able to make greater outlays the enterprise fund from above-plan profits, and new procedure has been established for making allotments from this fund to cover expenses on measures connected with new equipment.

Second, a new system of covering expenses in curred in mastering the output of new machines being introduced, as well as a new procedure fo fixing wholesale prices of new models of machin produced by machine-building enterprises. It is known that mastering the manufacture of new eq ment, particularly in the early period, entails c siderable expenses, as a result of which produc tion costs of new models are high. Marx had al ready pointed out that the expenses incurred by enterprise which utilizes new inventions are al- ways much higher than those of the enterprises which arise on the ruins of the former. That is

vating enterprises usually go bankrupt and it nly their successors that prosper, for they buy ne buildings, machines, etc. at low prices. (4) ay, despite the fact that the capitalist monopo- make extensive use of credit for the purpose, up special funds and are bolstered by generous e subsidies, the high initial expenses of de- pment are one of the main reasons for the de- in the introduction of new equipment under a talist economy.

ne socialist system of planned economy has y opportunity to make full use of its advantages is sphere to eliminate the obstacles involved in igh initial costs of technological progress. ever, this requires the establishment of a spe- system of compensating for the expenses in- ed in mastering the manufacture of new ma- es and of fixing prices for new equipment. ntil now, all the expenses incurred in developing w machine, for instance, were charged by the rprise to its costs of production, and on the ba- of these high costs the price of the new model set. The customers of the enterprise often d this price prohibitive. Unless the high initial s are covered by the price of the new model, enterprise which put a lot of effort into master- its production will suffer losses which will e the manufacture of new machines economi- y unprofitable. Thus, an obvious contradiction eloped: in order to stimulate the output of new hines it was necessary to fully compensate the ducer for the relatively high expenses incurred astering their output and to ensure at least a mum profit. However, the above price placed customer at a disadvantage and thus acted as bstacle to the utilization of the new model. Ob- sly, prices of new machines should be set in a manner that they will stimulate the develop- t of new models by the machine-building enter- es, that is, by the producers, on the one hand, stimulate the customer enterprises of all ches of the economy to renew their equipment, ne other. This can only be achieved provided a part of the expenses incurred by the initial tering of production of this new equipment is red not through the production costs and, hence, ugh the price, but in some other way. This way been found in the form of a centralized fund for tering the manufacture of new equipment. The sion provides that the economic councils, minis- and departments of the USSR in charge of ma- e-building and metalworking enterprises are ted the right to create a fund for mastering the ut of new equipment, to which enterprises would ribute a certain percentage of the production of their output. This will enable the enterprises to charge the expenses planned for designing, experimental and other work — connected with mastering the production of new models prior to serial production — not directly to the production costs of the new machines, but to meet them out of the special fund for mastering the manufacture of new equipment, and thereby to compensate for the expenses incurred.

The setting up of this fund will make it possible, from the very beginning, to fix a normal selling price for the new item, that is, to adjust it to the level of current wholesale prices for serially produced and similar equipment, with due consideration for the higher efficiency and other technical and economic advantages offered by the new model. Such a price would be advantageous both to the producer of the new model, since the initial costs would be covered out of the special funds, as well as for the customer, since it will be economically profitable to replace an old model by a new one.

An equally important role in accelerating technological progress in the national economy will be played by the special new bonus established in the same decision for workers who participate in developing the new equipment. The amount of the bonus will depend on the economic yield derived by the national economy from using the new equipment. (5)

Until now, bonuses for designing and introducing new equipment were granted only in the machine-building industry. At the same time, the annual plans of work on new equipment, as a rule, did not establish in advance the amount of the bonus for each particular job, whereas the procedure for granting the bonus was very complicated with the result that there were impermissible delays in making bonus payments. All this considerably reduced the incentives of the workers of the enterprise in developing new models. Another serious defect in granting bonuses for new equipment was that the distribution of the bonuses among the workers was often done mechanically, without due consideration for the contribution made by each individual worker. At some of the enterprises bonuses for the introduction of new equipment were not singled out and were often granted jointly with bonuses for other production indices.

Bonuses will now be granted for work on new equipment not only in the machine-building industry but in all branches of industry, construction, transport, communications and geological prospecting establishments. This is because technological progress is not solely confined to developing improved implements of labor, or new models of products put out by machine-building plants. Technological progress covers all industries and

involves the mastery of new types of raw and other materials, the development and introduction of highly efficient technological processes and advanced methods of work; in the sphere of construction it includes the development and introduction of mechanized flow methods of assembling buildings and structures, advanced methods of building and assembly operations; and in transport it includes the introduction of technically improved transportation and communications equipment, advanced methods of organizing shipments, and so on.

The decision also provides that managerial personnel of enterprises which fail to carry out the plan for introducing new equipment are deprived of bonuses for the fulfillment of the plan for the output of mastered equipment. Further, it provides that those who waste no time in mastering the output of new items will be given bonuses not only for this achievement alone, but (in the machine-building industry) also an additional bonus for the fulfillment of the output plan and for lowering production costs. This will play an important part in stimulating the fulfillment of the plan for the introduction of new equipment. It is known that the planned assignments for mastering the production of new items were, as a rule, carried out much less satisfactorily than the assignments for serially produced items. The decision is directed above all against those managerial personnel who give preference to the fulfillment and overfulfillment of plans for output of serially produced items of long standing or of outdated equipment, and seek thereby to receive high bonuses for pursuing such a policy instead of concentrating their attention on the more complicated and troublesome job of mastering the output of new, more advanced equipment. This means that the Party Central Committee and the government regard the plans for the introduction of new equipment as a most important division of the state national economic plan, the degree of fulfillment of which is an indicator of the fulfillment of the entire plan of the given enterprise.

The size of the bonus is to be assessed on the basis of the economic yield to the national economy in the course of one year as a result of fulfilling the assignment on new equipment. This direct dependence of the bonus on the actual economy derived from the particular measure or measures provides a natural and healthy basis for material incentives to technological progress. In this connection it is most important to make a correct appraisal of the economic effect of the planned measures for the development and introduction of new equipment for which bonuses should be granted, because the size of the bonus depends on the economic effect derived from the particular measure. It is not technological improvement for its own sake that we want, but the economic yield to be derived by the country as a result of such impro ment.

The decision of the June (1959) Plenary Meeti of the Party Central Committee pointed out that was impermissible to ignore or underestimate t economic effect to be derived from such measur when certain enterprises develop costly machine automatic lines and other assemblies and mecha nisms which yield no significant economic effect upon their introduction. This shortcoming was a dealt with in the July (1960) Plenary Meeting of t Party Central Committee. The new machines, mechanisms, technological processes, structura elements, etc., above all should meet the requir ments of the most rational and economical utiliz tion of living and embodied labor, namely, the re quirements of increased productivity of social la bor, bearing in mind, as Marx pointed out, that o of the basic economic laws governing socialist s ciety is the economy of social labor, that is, a r duction of cost per unit of output. The introduct of new equipment should ensure higher output, better quality and lower production costs, lighte and more healthy conditions of labor, and a shor period of recoupment of capital invested com- pared with the best scientific and technological achievements both at home and abroad.

In determining the economic effect of a partic measure for the introduction of new equipment t basic qualitative indices should be concretely an lyzed and compared, and their quantitative expre sion found in the saving to be derived by the soc economy as a result of the implementation of the measures. In order that the economic effect of contemplated measures may be correctly deter- mined and the size of the bonus for the measure question be fixed accordingly, the economic cou cils and enterprises should be provided with sou instructions on assessing the economic effect derived from the introduction and mastery of th new equipment. The document which can be use as a basis for the elaboration of instructions to form with the specific features of each individua branch of national economy is the "Standard Meth ology of Determining the Economic Effectiveness of Capital Investments and New Technology" draf by the Institute of Economics of the Academy of Sciences of the USSR with the participation of ot institutes concerned, the USSR State Scientific a Technical Committee, the USSR Central Statisti Administration and the USSR Construction Bank and approved by the USSR State Planning Comm tee and the USSR State Construction Committee

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ne of the principal prerequisites for increasing role of economic stimuli in accelerating tech- l progress is the adjustment of prices for the ut of heavy industry.

view of the fact that a special fund has been ated to cover the initial expenses incurred in tering the output of new items, the problem of ng prices for new equipment may be readily ed. However, the question of creating favora- economic conditions for the development of new nology is not confined to this measure alone. matter what part of the initial expenses required naster new equipment may be covered, the out- of the new items, at least in the first year or will be much less profitable, as a rule, than output of serially produced items, the prices hich were fixed more than 5 years ago. There still cases when an enterprise which is suc- sfully mastering the output of new and more orate items is on the verge of operating at a or is deriving a profit of only a few per cent, reas an enterprise producing obsolete models perating at exceedingly high profit rates. In over- lling the plan of output of obsolete equipment securing high profits, such an enterprise, as a , gets higher bonuses for carrying out assign- ts and lowering production costs, and hence it ble to allocate larger sums from the planned above-plan profits to the enterprise fund, and n. In this particular case the enterprise is ying the "advantage" of additional "bonuses" being backward. How can there be any talk of ntives for introducing new production techni- s in a case like this, if the enterprise has an rest in doing the opposite: evading in every way output of new models, because it gets higher its for producing outdated equipment.

order that the rate of profit derived by certain rprises will no longer stimulate the output of ated equipment, and in order to turn it into an ctive instrument in the hands of the planning and nomic bodies designed to spur the introduction ew equipment, it is necessary to revise the lesale prices of goods produced by heavy indus- and to eliminate the unjustified diversity of it rates among separate industrial branches and rprises. We must also establish the kind of e relationships among products of different nches and within branches which, rather than ering the production of new models of equip- t will stimulate it, thereby eliminating not only losses incurred in the output of specific items also the unprofitable operation of certain indus- s. This would create favorable conditions for introduction of genuine self-support at all of industrial enterprises.

It is a matter of a general revision of prices for the products of heavy industry in order to effect a radical improvement in current price relationships, rather than particular price revisions for individual items which we have had several times in the last few years. Since 1955 there has been no general revision of prices. The need for such a revision is becoming increasingly obvious; moreover, the conditions are now ripe for it.

Current prices are largely out of date not because a fundamental error was committed five years ago when they were fixed (although certain mistakes were made). They are out of date above all because five years have passed since the time they were fixed. No matter how ideal a price may be when originally set, under a socialist economy with its high rate of growth of labor productivity and the rapid lowering of production costs, the initial price will no longer correspond to the actual level of production costs. If the growth of labor productivity and the lowering of production costs were to proceed uniformly in all branches of the economy, the price relationships among individual types of goods would more or less correspond to their actual costs of production. However, there was not nor could there be any such uniformity. In some branches production costs dropped considerably, whereas in others the decline was not so great, and in still others, in coal mining, for instance, costs increased for a variety of reasons.

Considerable changes have occurred in some industrial branches not only in labor productivity but also in the wage level. In connection with wage adjustments, the share of wages in production costs has changed in some of the industries. This has been one of the reasons for the uneven change in the level of production costs in these sectors. Considerable changes have occurred in the structure of production, as well as in the relative rates of growth of some of the industrial branches; this is particularly striking in the case of the fuel industries. As a result, some branches are highly profitable at present, whereas others are not yielding a sufficiently high rate of profit, and still others are operating at a loss – for instance, the coal and ore mining industries.

As far as individual products are concerned, there is an even greater diversity in rates of profit. All this urgently calls for a revision of the wholesale prices of industrial products and, above all, for an improvement in the price relationships among certain items.

However, highly favorable conditions have now been created for correctly fixing wholesale prices with due consideration for the future prospects of development of certain branches. We may cite,

for example, the revision of agricultural prices; the setting up of new organizational forms for the management of industry; the current Seven-Year Plan for the development of the national economy and, in particular, the plan for lowering production costs which is a most important basis for working out new wholesale prices; the recent wage adjustments in industry and construction; and finally, the recent revaluation of fixed assets in industry, construction, transport and communications, and the consequent readjustment (to be carried out this year) of depreciation rates in the separate branches of the national economy The latter measure will make it possible to fix prices with due regard for the varying share of depreciation in production costs.

All this shows that we must not postpone the revision of wholesale prices of industrial products. The decision of the July (1960) Plenary Meeting of the Party Central Committee provides that the wholesale prices of the implements and means of production are to be revised in 1961-1962, "bearing in mind that the prices should reflect more exactly the costs incurred in the production of the goods and should ensure the necessary accumulation for the further development of industry." It is imperative that we proceed with the preparatory work immediately, for this is a complicated, labor-consuming and time-consuming job.

New price relationships should be established on the basis of a concrete analysis which considers not only the current level of production costs, but also the rate of growth of output, the rate of growth of labor productivity, and the lowering of production costs in the individual branches of industry as established in the Seven-Year Plan. Regional changes and other changes in the individual branches of the mining industry should also be taken into account

Above all, operation at a loss in the coal and ore mining industries should be eliminated. Perhaps this will call for a rise in the prices of rolled goods. At the same time the prices of oil products, chemical products, electric power and many items of equipment and metal products should be reduced.

Changes in price relationships among certain items will eliminate the extreme diversity in profit rates in some of the branches of heavy industry. These changes will considerably reduce the excessively high profit rates of some enterprises and simultaneously help to sharply reduce the number which operate at a loss. The overwhelming majority of currently unprofitable enterprises will become profitable, and this will enable us to strengthen cost accounting at these enterprises.

Thus, it is not a matter of arbitrarily raising the prices of heavy industry goods as suggested by some of the participants in the discussion on commodity production and the role of the law of value in the Soviet economy, but of the need to radically change the price relationships among certain items

Such a revision of price relationships among certain types of goods does not require a change in the over-all rate of profit prevailing in heavy industry in 1959, that is, it can remain at 10%. However, this average rate will be based on a more correct price relationship. Moreover, the rate of profit formed as a result of the price revision will be the initial average rate of profit in the industry as a whole; the new prices will remain valid for the next four or five years. During this period there will be another drop in production costs which, according to the estimate of the Price Bureau of the USSR State Planning Committee, will raise the average rate of profit in the industry as a whole to at least 17%. This is already a qualitatively new level of profitability. As can be seen from the same estimate, in 1965 it will provide the means for making the contemplated capital investments and ensuring the growth of working capital in heavy industry completely out of its own accumulations.

When the wholesale prices of means of production are readjusted, in particular the prices for the goods of the machine-building and metalworking industry, it will be necessary to establish price relationships between old equipment which has long been in serial production and new equipment which will be favorable both for the producer and the consumer of the new equipment; the prices should encourage the introduction of new equipment in the national economy and correctly reflect the actual economic yield derived from its introduction. In drawing up new price lists for equipment after wholesale prices have been revised, all the obsolescent equipment whose further production is inexpedient will be deleted from these lists. As for those items the production of which can be discontinued only in the next few years, prices should be made as low as possible in order to encourage producers to change their assortment at the earliest opportunity and to master the output of more advanced models. At the same time conditions should be created which stimulate the output of new, advanced models of equipment and metal goods.

The adjustment of wholesale prices for heavy industry products will play an important part in strengthening cost accounting at enterprises.

As we know, one of the prominent features of cost accounting is the principle of material interest in the results of the labor both of the individual

ker and of the whole collective of the enterprise. ost accounting is a highly important method of omical socialist management. Strengthening accounting at the enterprise means to manage onomically, to see to it that there is no waste aw materials, fuel, supplies and monetary re- ces, that high indices are achieved in the utili- on of production capacity, that the wage fund is economically and that a correct balance be- n the growth of labor productivity and average es is ensured. Strengthening cost accounting very possible way is a vital precondition for lerating technological progress in the entire onal economy.

he decision of the Party and government on ging the price scale is an important prerequi- for strengthening cost accounting and other ors of economic stimulation in the socialist omy.

his measure, which stems from the vigorous th of the socialist economy and the soundness s financial system, will, in turn, further help rengthen the country's finances and monetary ulation, implant thrift and combat mismanage- t and squandering of funds. The prestige of Soviet ruble and kopek is increasing markedly e eyes of the people. The role of money as an rument of economic stimulation and control over neasure of labor and the measure of consump- will increase considerably. The same will be of the role of wages and money payments for kday units in the collective farms as instru- s of material stimulation of the workers in ing labor productivity and lowering production s. This will be of tremendous importance for levelopment of the entire national economy. a result of this measure each ruble and k will play a more significant part in the opera- of the enterprise, and this will contribute im- sely to the further strengthening of cost ac- ting. The higher the value of the Soviet ruble, ounder will be the cost accounting system and nore consistent will be the financial control cised by the state over the activity of the enter- e, and over the correct relationship between rowth of labor productivity and average wages. he factors of economic stimulation will then be- e even more effective in spurring a further growth of labor productivity, a lowering of production costs and a rise in the well-being of the Soviet people. The principle of material interest is a powerful motive force in our development. The further improvement of the methods of economic stimulation will enable us to utilize this principle more fully in the interests of communist construction.

The July (1960) Plenary Meeting of the Party Central Committee gave the planning bodies and the Union Republics a task — that of working out concrete proposals for the further improvement of the state plan indices, "bearing in mind the raising of the interest of the enterprises and economic councils in the more efficient utilization of fixed and working capital, in the output of the necessary assortment of goods of high quality, in raising labor productivity and lowering production costs, as well as in improving the planning of the comprehensive development of regional economies."

The implementation of the decisions of the July (1960) Plenary Meeting of the Party Central Committee will play a tremendous role in accelerating the building of communism.

Footnotes

(1) V. I. Lenin, Collected Works, Vol. 32, p. 425 (Russian edition).

(2) N. S. Khrushchev, Speech at the 3rd Congress of the Rumanian Workers' Party, Pravda, June 22, 1960.

(3) V. I. Lenin, Collected Works, Vol. 32, p. 370 (Russian edition).

(4) Karl Marx, Capital, Vol. 3, p. 109-110 (Russian edition).

(5) Pursuant to this decision the State Committee on Labor and Wages of the USSR Council of Ministers, jointly with the USSR State Planning Committee, the USSR Ministry of Finance and other bodies concerned, are drawing up a "Statute on Bonuses for Workers in Industry, Construction, Transportation and Communications, and in Geological Prospecting, Scientific Research, Planning and Designing Organizations." The principal points of the contemplated Statute have been set forth in No. 6 of our journal.

Kommunist, No. 13, 19

A. VOLKOV:

Reduction of the Working Day and Adjustment of Wages

With the mighty development of the socialist economy to rely upon, the Soviet Union is consistently putting into effect the program of raising living standards as laid down by the 21st CPSU Congress. The year 1960 will go down in history as an important stage in the realization of this program. It has been marked by government measures of great significance, the most outstanding of which are the adoption and initial implementation of the law abolishing all taxes on the population, and the completion of the transfer of all factory and office workers to a reduced working day, accompanied by an adjustment of wages.

The general reduction of the working day, while allowing the workers more time for rest and cultural recreation, presupposes at the same time a considerable rise in labor efficiency. This cannot be achieved by administrative orders alone: an order is issued — and the matter is finished. Careful preparations are required from each establishment, including a number of organizational and technical measures. Socialist industry is to be raised to a new, higher level, resulting in a further advance in the Soviet people's standard of living.

Thanks to extensive organizing activities on the part of local Party, economic and trade union bodies, and to the active cooperation of the masses themselves, the transfer to a reduced working day has been effected, as a rule, without the employment of additional labor, by improved utilization of internal production reserves of the factories and building sites. Industry is being extensively mechanized and automated and the technology and organization of production improved. On the railroads a number of organizational and technical measures have helped to reduce labor requirements by more than 88,000 men with a total annual payroll of some 900 million rubles.

The reduction of working hours among the staffs of the central offices of ministries and departments and other institutions of equal rank, as well as of the Party, trade union, Komsomol and other public organizations, has been carried out without any increase in staffs and the total payroll. This has made it necessary for the heads of all institutions, in collaboration with Party and trade union bodies, to secure an improvement in the work of their staffs.

While reducing the length of the working day, th Communist Party and the Soviet Government have set themselves the task of adjusting wages.

The wage adjustment, like the transfer to the shorter working day, has been completed in the leading branches of heavy industry. In the textile industry the introduction of a new wage system ha begun with some delay compared to the original timetable. In this industry, in which most of the workers are women, the suggestion has been mad that in connection with the transfer to the shorter working day,the work be rearranged so as to reduce night work and provide for more convenient hours of work and rest.

At the "Sovetskaya Zvezda" thread-spinning mi (Leningrad) a shift schedule has been worked out providing for longer day shifts and shorter eveni and, particularly, night shifts. Two shifts out of three work five days a week, averaging 41 hours. This schedule has been introduced at the "Sovetskaya Zvezda" and "Krasnaya Nit' " mills and ha won the unanimous approval of their workers. Th USSR Council of Ministers has recommended to t Union Republics and economic councils that they introduce, by agreement with the trade unions, a five-day week in textile mills working three shift with two days off for the night and evening shifts.

In contrast to the other industries, the adjustment of wages and the reduction of hours are not being carried out simultaneously on the railroads and in highway and air transportation. While the transfer to shorter hours in the transport industr has already been largely completed, the adjustme of wages is just beginning and will be completed the fourth quarter of 1961. Here some seven mil lion workers are to be shifted to a new wage scal

The adjustment of wages on the state farms an in forestry will also be completed in 1961. Here the plan calls for closing the gap both between th wage levels in these and other branches of the economy, and among the different categories of workers within these sectors.

In the process of adjustment, salaries and wag in farming and forestry will be brought into line with those paid in the food and in most light indu tries. The wage rates of hand laborers, horse a tendants and those employed in animal husbandry

be raised by 20 to 25% on the average, with a increase for those in the lowest grade of the e scale.

or the first time a uniform system of pay will ntroduced in all state farming establishments organizations. N. S. Khrushchev has repeated-rged that wages of state farm workers be made endent on their output. This is the principle erlying the new wage system on the state and sidiary farms. Wages here will depend upon the ntity and quality of work done and will be re-d to the results of the operations of the estab-ment: a reduction of direct expenditures per of output, receipt of profit over and above the , and so on.

he new system of pay being introduced in state subsidiary farms has already been tested in ctice. It has been applied for a number of years ne Kuibyshev state farm in Tadzhikstan, the ugarovo, Teplichnyi and Kolomenskii state ns, Moscow Region, the Aigurskii state farm, ropol Territory, and at a number of other farms. 959 one thousand teams worked under this wage em in Uzbekistan. In Moscow Region 162 state ns have been put on a shorter working day and wage system ahead of schedule, thanks to the erience already gained in this field.

avorable results have been achieved in practi-y all farms where the new system is in opera-. Output has increased, the cost of production the amount of labor per unit of output have de-ased and wages have gone up.

ne favorable situation prevailing in the national omy has made it possible to adjust wages in e of the non-productive branches ahead of edule. Thus, in 1960 wages have been adjusted personnel at the motion picture theatres, in o broadcasting and television, and in some ing and catering establishments. The housing agement employees of local Soviets have also their wages adjusted.

ne transfer of individual factories and whole in-ries to a shorter working day and the adjust-t of wages have created the conditions for a ner growth of output and an improvement in the ity of production. Thus, labor productivity in stry during the first half of 1960 was 6.4% high-an in the same period of the preceding year. rates of growth of labor productivity and wages t be such as to ensure that productivity in-ses faster than wages, no matter how rapidly atter may rise.

bstantial changes have been recorded in the mining industry. It is well known that the ts coal basin, which accounts for 37% of the coal output of the country and some 60% of its coking coal, failed to carry out its output plans prior to the introduction of the shorter working day. Since the working day was reduced and the new wage system adopted the plan has been regularly fulfilled to the extent of 101-102% and the number of backward mines and sections reduced by approximately 50%.

As a result of growing mechanization and the improved organization of production and labor, the rate of increase of labor productivity has appreciably advanced. While in 1956 there was a 1.3% increase in average monthly labor productivity, the first six months of 1960 showed a 6.2% gain, the Donbas registering an increase of 6.4%, Kuzbas — 7.2%, and Karaganda — 7.7%. This was the biggest productivity gain in the coal mining industry in eight years. The entire increase in coal output this year has been due to rises in productivity only.

These results have been secured primarily by the fact that the production processes and labor organization in the mines have been improved and bottlenecks eliminated. Thus, at the coal mines controlled by the Stalino Economic Council alone 100 kilometers of timbering have been renewed this year, 53 kilometers of hauling lines overhauled, and underground transport and hoisting capacities extended.

A good deal has also been done to improve the organization of production. Formerly the mines and pits worked uninterruptedly as a rule. At present all mines and pits of the Cheliabinsk, Kemerovo, Lugansk, Tula and Primorsk Economic Councils operate with breaks during the week. In the Stalino and Karaganda areas, too, breaks are gradually being introduced. Experience has shown that, other conditions being equal, this leads to a 4 to 6% increase in labor productivity. In addition, this frees time for regular repairs in the pits, machinery and equipment, and the common day off makes for better organization of the miners' recreation.

In the iron and steel industry two years of work on a shorter working day have resulted in a 13.7% rise in average monthly labor productivity and a 28.7% advance in hourly productivity. The nonferrous metal and chemical industries have recorded similar gains in labor productivity. The number of industrial establishments failing to fulfill their production targets has substantially declined. In iron and steel, for instance, their number has decreased by about 75%.

No less revealing are the initial results of the operation of machine-building enterprises under the new conditions. All their targets for gross output, labor productivity and cost reduction are being successfully fulfilled. Thus, 416 machine-building

factories with more than 700,000 workers operating under the new system registered, during the first quarter of 1960, a 19.6% increase in gross output, a 10.5% gain in productivity, and a 5.5% rise in average wages compared to the same period in 1959. In the machine-building industry as a whole the increase in gross output during the same period was 16.8%, in labor productivity — 8.8%, and in wages — 4%.

Gratifying successes have also been achieved by the oil industry. Because of increasing material incentives among workers in the production and refining of oil, as well as in drilling, the oil and gas industry has been systematically fulfilling its output plans and its assignments in increasing labor productivity despite a reduction in working hours. Suffice it to say that where wages have been adjusted, labor productivity went up by 12% during the first half of 1960 (compared with the same period of the previous year).

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A characteristic feature of the transfer to the shorter working day and new wage systems is that workers' wages, far from dropping, have risen as a rule. Thus, compared with 1956, average wages in the coal mining industry increased 26% by 1959, in iron and steel — 14%, in non-ferrous metals — 21%, and in chemicals — 13%. The greatest increases were to those in the lower wage brackets. The basic rates of the first grade of the wage scale in heavy industry have risen to 450-740 rubles, in the building trades to 560, and in the chief branches of the light and food industries to 400-510 rubles.

As a result, the number of workers and employees with rates of less than 600 rubles a month in heavy industry, where the adjustment of wages has already been completed, has been reduced by more than 50%, including 78% in coal mining, and almost 66% in iron and steel. The reduction in the number of low-paid workers will be even more pronounced in the light and food industries.

In the course of the wage adjustments our Party's policy of gradually lessening the gap between low and high wages is thus being consistently implemented. Wage scales in which the highest grade exceeded the lowest by 2.5 to 3 times are being replaced by wage scales reducing the difference to 1.8 to 2 times.

The abolition of taxes on wages will have a substantial effect in raising living standards (especially among the workers with low and medium pay). This year income taxes and taxes on single persons and persons with small families earning less than 500 rubles a month will be entirely repealed, and those on persons with wages between 500 and 600 rubles a month will be cut by 40%. In terms of annual income this will mean an addition of 3.6 billion rubles to the earnings of these groups of people. In 1961 another 4 billion rubles will be added to the people's income. These measures w help to bring the wages of the low- and high-paid groups closer together.

The following question is often asked: is it necessary that all workers without exception receive pay rises under the new wage systems? There can be only one answer to this. Could ther be any talk of adjusting wages if the wages of all workers were to be "pulled up" to the level of tho who exceed their work quotas by, say, 5 or 6 time Of course not. This would not bring order into th wage system but would involve a mechanical and unwarranted wage increase requiring fabulous su from the state budget.

It cannot be regarded as normal that the wages of the workers of the Provgvozd factory, controll by the Metalworking Industry Administration of t Moscow Executive Committee, which employs a little over 300 men, have reached an average of 950 rubles as a result of quota fulfillment by 220 and more, while at such a big plant as the Mosco Kalibr tool factory the average wages even after the wage adjustment are only 925 rubles a month.

The meaning of the wage adjustment is precise that uniform conditions of pay are introduced together with technically substantiated work quotas uniform job classification handbooks are introduced within industries, and the office rosters ar brought into accord with the approved salary schedules. As a result, while the wages of the ov whelming majority of workers are being increase the incomes of a small group of overpaid people may even be slightly reduced. Of course, no unjustified wage cuts should be permitted where thi may be due to poor preparations for the change t the shorter working day.

In connection with the wage reform the setting output quotas acquires extraordinary importance Now that new, higher wage scales have been intro duced and the bonus system improved, the necessary economic conditions have been created for a radical improvement in rate setting, for the whol sale introduction of technically sound work quota with due regard for modern level of technology, organization of production and advanced experience. Discrepancies in existing work quotas mu be eliminated, making it possible to observe mor fully the principle of equal pay for equal work.

In most of the establishments where the new wage system has been introduced the antiquated and too low work quotas have been replaced by n technically substantiated ones. The Central Bur of Industrial Output Quotas alone has issued 75

a reference books, 59 departmental or stand-
quota manuals and 10 volumes of methodologi-
ınd instructional material on setting output
as. Where the entire preparatory work was
ormed correctly the new quotas were not intro-
d mechanically, so that they have played an im-
ant role in creating the organizational and tech-
l conditions necessary for a further rise in la-
productivity.

ıe improvement in the work of setting output
as has led to a sharp increase in the share of
nically substantiated work quotas. On April 1,
, they accounted for 91% of all quotas in the
e industry, 79% in coal mining, 75% in iron and
l, 74% in non-ferrous metals, 73% in oil, 72%
uilding materials, 69% in chemicals, 64% in oil
ning.

ıe of the basic features of the wage adjustment
ıe correct classification of work and workers
ng wage grades. The old job classification
uals were compiled by each ministry and de-
ment independently, resulting in a great diver-
in occupational and job terminology. With ex-
ive aid from the economic councils, trade
ns, research institutes and factories new job
sification manuals for the various branches of
economy are being compiled. In the last three
s 235 manuals of this kind have been worked
ınd approved with the collaboration of leading
rts from research institutes, economic coun-
and enterprises.

assification of jobs and workers in all indus-
s, including the building industry, now begins
the first grade, whereas formerly it used to
ı generally with the second, third or even
er grades.

the process of wage adjustment substantial
ges have been made in the system of bonuses
to workers, engineers and technicians. At
ent new bonus systems are being introduced
h strengthen the material incentives of the
kers in the quality and quantity of their work,
economically ineffective and confusing systems
y are being scrapped. Thus, prior to the wage
rm the progressive piece rate system was in
t in a number of industries. In many cases it
d to stimulate productivity, led to dispropor-
between the growth of labor productivity and
s, and to high production costs. The rates
ided for extremely high progressive bonuses
multi-stage piece-rate increases, which great-
mplicated the work of recording wage claims.
e paper industry, for instance, a progressive
e rate scale was in effect which provided for
tages of increases in rates.

ıe new bonus system establishes a fundamentally new basis for bonus payments. It is based on the principle of stimulating collective material interest in improved quality and increased quantity of output. This means that along with material stimulation of individual workers, similar stimulation of complete groups (gangs, teams, sections, shops) is introduced. This bonus system is being applied because of the extensive introduction of integrated mechanization and automation, under which the work of the individual depends more and more upon that of a complete group.

In the coal industry, for instance, the old system of individual progressive supplements for fulfillment and overfulfillment of work quotas, which were paid irrespective of fulfillment of the production plan by the section or pit, has been superseded by collective bonuses to all workers for the fulfillment and overfulfillment of output plans. This has stimulated collective forms of work organization at the stopes and headings and more efficient operation of machinery.

In such industries as the chemical, light, printing, foodstuffs, etc., in addition to fulfilling quantitative assignments, particular importance is attached to making rational use of materials, improving the quality of output, observing work schedules, increasing the output of finished goods, etc. Here bonuses will be paid for fulfillment and overfulfillment of qualitative indices, provided production plans and targets are carried out. At the end of last year new conditions were introduced to stimulate the material incentives of managerial, engineering, technical and office workers. Here the accent is placed on quality, particularly cost reduction.

With the introduction of the new bonus system, managerial and engineering personnel are expected to develop a higher sense of responsibility for the proper use of the wage fund, the maintenance of production contacts between enterprises, the fulfillment of plans and targets for the supply of their products to factories of other economic regions, cooperative deliveries, and deliveries for the needs of the state as a whole. This will promote discipline in the national economy and help to eliminate excessive bonuses to individual groups of managerial, engineering and office workers. The workers' attention to the long-range prospects of development of production and its technical improvement is thereby also strengthened.

Heretofore the rules governing allocations to the enterprise fund did not give preference to establishments producing new machinery. All additional expenses involved in the production of new machinery and equipment were included in the production costs of these items, reducing the profits of

the enterprises manufacturing them and frequently making production of new machinery unprofitable.

To provide an economic stimulus to enterprises and individual workers developing new machinery, changes had to be made in the system of building up and using the enterprise fund, and new ways devised of covering the cost of mastering the output of new machinery and of fixing its prices. The time was ripe for bonuses to be introduced for those workers in industry, construction, transport and communications, as well as in prospecting, research, planning and designing organizations, who work on assignments involving the production of new equipment.

All these problems were resolved in the decisions of the Party Central Committee and the USSR Council of Ministers, "On Economic Stimulation of Enterprises and Raising the Material Interest of Workers in the Development and Introduction of new Machinery and Technology and in Comprehensive Mechanization and Automation of Production." Bonuses for work on new machinery are being introduced in all industries, as well as in building, transport, communications, prospecting, research, planning and designing organizations. Compared with the existing system, material incentives will be applied on a wider scale.

The size of one-time grants will be dependent upon the economic effect produced in the national economy by the new equipment. Where the economic effect cannot be estimated, the sum total of premiums for the development and introduction of new machines, as well as for successful performance of theoretical, planning and prospecting work, is to be equal to no more than 20% of the wage fund calculated on the basis of salary rates paid for a period fixed by the plan.

Premiums for work on new machinery must be in addition to bonuses for reduction of costs, overfulfillment of production plans and improvement of the quality of output. For workers of the machine-building and metalworking industries, which account for a large share of the new machines being manufactured, the premiums for fulfillment and overfulfillment of cost reduction targets may be raised to 50%. Extra premiums are established for jobs of special importance and for exceptional achievements in developing modern equipment. Workers participating in the creation of new machinery can receive annual premiums equal to as much as three times their regular monthly wage rate. Bonus funds remaining unused in the current year may be expended by enterprises and organizations, as well as by economic councils, ministries and departments, territorial and regional executive committees, in subsequent years.

The measures designed to stimulate the workers' material incentives in the development and introduction of new machinery will be instrument in accelerating technical progress.

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A number of shortcomings and unforeseen factors have emerged during the transition to the shorter working day and the adjustment of wages

It appears that some enterprises were transferred to the shorter day and new wage systems without adequate preparations. The transfer schedules were sometimes drawn up without regard to whether the particular enterprises were prepared to operate under the new conditions, which resulted in their systematic disruption. T implementation of the proposed organizational a technical measures designed to raise labor productivity was poorly controlled by the economic councils and local authorities. This resulted in output and wage reductions in some of the factories following their transfer to the seven-hour day.

Such was the case, for instance, in the Novo-Kramatorsk machine-building plant. Because of poor preparations for the change to the shorter working day the labor productivity target for Jun of this year was not fulfilled for the plant as a whole. The situation was particularly bad at the metal construction shop, where nearly 80% of the organizational and technical measures envisaged connection with the reduction of the working day mained on paper. Mechanization of labor-consuming processes in the shop proceeded very slo ly. There was much idle machine time. As a re sult, after changing to the shorter working day i June 1960, the plant failed to carry out its plan a reduced its output; the workers failed to carry o their work quotas and their wages were affected.

Serious difficulties are caused by incorrect classification of jobs and workers among wage grades. Sometimes workers are given grades which do not correspond to their skill, which results in wage-levelling tendencies and impairs t incentive to acquire higher skill. In some plants the lists of trades paid at the rates of those employed in hot, heavy or dangerous occupations ha been extended without any justification.

Numerous shortcomings have also been discovered in the field of setting output quotas when transferring establishments to the shorter work day and new wage systems. In some of the repu lics and economic regions the planned increases work quotas were not carried out. The old work quotas remained in effect after the new wage co tions were introduced, resulting in these quotas, particularly in the auxiliary departments,

fulfilled to the extent of 150% and more. annot be regarded as correct for the existing quotas to be mechanically recomputed in ac- nce with the higher wage rates so as to leave ece rates intact. The preservation of too utput quotas and the mechanical recomputing sting quotas while basic wage rates are being d undermine the stimulus to increase pro- ity and may result in the wage fund being xpended.

new wage conditions provide for payment of es for fulfillment and overfulfillment of itative and qualitative targets. In some cases, er, breaches of the bonus rules have oc- d. Some machine-building and metallurgical continue to apply the progressive piece rate m even after the adjustment of wages, al- as a rule it should no longer be practiced. introduction of the new conditions of pay for eering, technical and office workers should companied by simplification of the structure nagement, cutting down of excessive staffs eir reduction to the approved lists of offices bs. In many cases, however, salary rates xed mechanically, without any measures being to eliminate the top-heavy managerial appa- . In a number of instances only the top and m range of salaries are paid, with very few ces of minimum rates being applied, leading ustified salary increases for certain groups ineering and technical personnel.

the successful transfer to the six- and seven- day careful preparatory work aiming at the vement of machinery, technology and the or- ation of labor and production is of decisive tance. Favorable conditions must be created lfillment and overfulfillment of productivity s by all workers. However, the organiza- work connected with the change to the shorter ng day does not end here. On the contrary, ensues the most responsible period, when ves which have been revealed must be brought ction and smooth, rhythmical operation of the under the new conditions ensured.

transfer to reduced hours and the adjust- of wages may be regarded as completed only the economic potentialities for a further h of labor productivity and output of high qual- d at low costs have been fully utilized. therefore tremendously important for the organizations, trade unions and economic ils to exercise systematic and unremitting l over the operations of enterprises, not only the period of transfer to reduced hours but oo, until this entire matter is successfully eted.

The decisions of the 21st CPSU Congress call for a further reduction in the working day and an improvement of the wage system. In 1962 the 40-hour week will be universally introduced, and in 1964 a beginning will be made in the gradual transfer of all workers to a five- and six-hour day and a 30 to 35 hour week, the shortest working day and working week in the world.

The State Committee on Labor and Wages of the USSR Council of Ministers, acting under instructions from the Party Central Committee and the government, is working out concrete proposals for the introduction of a new minimum wage of 500 to 600 rubles a month and further wage increases for medium paid workers. These measures require further improvements of the wage system, especially the wage scales and salary schedules.

The need for improving the wage system in the period 1963 to 1965 is dictated, apart from everything else, by the fact that, in accordance with the decisions of the 21st CPSU Congress and the July Plenum of the Party Central Committee, new technology, comprehensive mechanization, automation and electrification of production are to be extensively introduced in the next few years. This will be accompanied by a substantial rise in the cultural and technical level of the working class and changes in labor organization and the occupational composition of the population.

For the principle of stimulating individual material incentives to be consistently observed under the new circumstances, the wage system will have to be brought into harmony with the new conditions of production and labor. With the increase of the minimum wage to 500 to 600 rubles the wage and salary scales will undergo a further unification. It is important to ensure the greatest possible uniformity in the classification of all jobs according to their complexity throughout the national economy. The continuing economic and cultural development of the eastern and northern parts of the country and the development of agriculture there will make it possible to further reduce the number of regional wage coefficients.

There will be important problems to solve in the field of setting work quotas. It will be necessary to extend the application of technically sound work quotas, with due regard for changes in technology and the organization of production, to more extensively apply consolidated output quotas, to improve methods of fixing work quotas for auxiliary jobs and to work out rosters of engineering, technical and office jobs, taking into consideration modern methods of management.

Our experience in the wage adjustments has shown that in industries with high degrees of

mechanization and automation the system of pay based on time work plus bonuses is the most economically justified one. In the future this system will apparently be applied even more widely.

Improvements in the entire price fixing system and a strengthening of cost accounting in accordance with the decisions of the July (1960) Plenum of the Party Central Committee will make for a greater interdependence between wages and salaries on the one hand, and the economic results of the operation of the enterprise, its costs of production and profitability, on the other. This will strengthen the collective material incentives of the workers to improve the work of their enterprises and adopt new technology.

The shift to the shorter working day and the wage adjustments are among the most significa economic measures of the current Seven-Year Plan. They affect the most important questions the development of socialist industry and the vit interests of millions of factory and office worke Consistent implementation of the Party's policy this important matter is of enormous economic and political significance.

The Party, trade union and economic organiza tions have gained much experience in recent yea in carrying out measures connected with the re duction of working hours and the adjustment of wages, and there can be no doubt that the Soviet people will carry out the decisions of the 21st CPSU congress in time and successfully.

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Voprosy Ekonomiki, No. 7, 1

D. MEERZON:

Work Quotas and Wages Under Conditions of Modern Technology

New equipment and integrated mechanization and automation, altering as they do the character of work and its organization, require improved methods and procedures of wage payment. It is, therefore, highly important to examine the application of new wage systems in such industries as iron and steel, non-ferrous metals, chemicals, and others, where technological processes are continuous and automation is extensive.

A number of heavy industries went over to the seven- or six-hour day and new wage systems between 1957 and 1959. Pursuant to a law passed by the Fifth Session of the USSR Supreme Soviet the transfer of all Soviet wage and salaried workers to shorter hours will be completed this year. The experience of the industries and enterprises which have already gone over to a reduced working day shows that this great social measure can, by properly using all available resources for raising worker productivity, be carried out without any detriment to production. As a rule, hourly output under the shortened working day goes up, and not only compensates for the decreased total work time, but even enables production to expand.

Increased production with shorter hours is achieved by introducing new equipment and advanced techniques, eliminating slack and all waste of time, and promoting greater labor discipline. I provements in methods of setting work quotas a the revision of wage systems are important fac tors in stimulating efficient operation of new eq ment and full and effective employment of work hours. In the heavy industries which have reduced hours and introduced new wage systems, basic rates and earnings of the workers have g up considerably. The share of basic wage rate total earnings has risen on the average by appr mately 50%. This has restored basic rates to t principal function of differentiating wages and p vided conditions for the extensive application o work norms based on scientific methods of tim study. For piece workers employed in the chie sections of metallurgical, coking, cement and chemical plants, work norms have been raised now approximate output targets. A number of enterprises in the iron and steel and other heav industries, after revising their wage systems, have adopted a plan known as "work norm — ou target," which has completely eliminated the ga between these two indices.

With the revision of wage rates and improvements in setting work quotas, wage incentive

ems have changed substantially. Time rate and s systems are now applied more widely. The ber of workers on progressive piece rates and ght piece rates has greatly diminished. The rate-plus-bonus system predominates in non- ous metals and chemicals, and the piece rate- -bonus system in the iron and steel, cement, precast reinforced concrete industries. (See able shown on the top of page 42.)

eduction in, or complete elimination of, the between work norms and output targets has lted in the share of bonuses increasing and of remuneration for norm overfulfillment de- sing in the extra pay above the basic wage rate. ses are the main component of above-basic- pay not only among workers on time rate s, but also among those on piece rates, as may een from the table shown on the bottom of page

mechanization advances, mass production eases, and flow-line output expands, work is increasingly based on scientific time study applied and norm overfulfillment percentages ne. It is a fact that the average norm fulfill- percentage is higher on manual jobs than on ine operations, and is lower on automatic pment than on multi-purpose machine tools. is so because with the advancement of tech- gy, the time required by a given task is in- singly determined by the capacity of the equip- , efficiency of technology, organization of pro- on, quality of materials; that is, by factors h do not directly depend on the worker's physi- ffort. Individual differentiation in labor pro- vity diminishes. That is why at most fac- s norm overfulfillment is much lower in the shops than in the auxiliary ones where the pment is less efficient and where individual ations and small-batch production prevails. th the revision of wage systems and the im- ement in methods of setting work norms the age percentage of norm overfulfillment de- s and the share of piece rate supplements to asic rate diminishes in all industries. At the e time a substantial difference in the composi- of the above-basic-rate pay remains in vari- ines of production. The lower the organiza- l and technical level of production, the larger e percentage of wages accounted for by norm- fulfillment. On the other hand, where tech- gy is advanced, bonuses predominate in the e-basic-rate pay. Thus, after the wage re- n, the share of bonuses in the above-basic- pay in the precast reinforced concrete indus- as 38.5%, while in cement it was 51.1%; in icals — 63.1%; in non-ferrous metals — 69.1% and so on. For workers employed on main equipment, the progressive piece rate system has almost everywhere been replaced by bonuses for fulfillment and overfulfillment of output targets by the team or group. At many enterprises of the chemical and non-ferrous metals industries, as well as at some iron and steel mills, such bonus payments have been combined with the time rate system.

Thus, after the wage revision, three systems have been adopted for highly mechanized continuous production processes: a piece rate system (usually with a small gap between work norms and output targets); the "work norm — output target" plan; and a time rate-plus-bonus system. What characterizes all these systems is the payment of bonuses for specified percentage fulfillment of output tasks. In a number of technically advanced industries, iron and steel, non-ferrous metals, chemicals, etc., all three systems are applied simultaneously. All three systems eliminate or strictly limit divergences between work norms and productivity targets. Under all three systems bonuses for fulfillment and overfulfillment of production targets constitute the bulk of the above-basic-rate pay. Insofar as these wage systems are similar to one other and differ essentially from all other types of time and piece wages, they can be merged into one group of wage systems characteristic of highly mechanized continuous flow production processes.

These three wage systems represent consecutive stages in bridging the gap between work norms and output targets. The "work norm — output target" system, though a variety of piece wages, is similar to a time rate system. This is confirmed by the following table showing the composition of workers' earnings at the Kuznetsk iron and steel mill's coking department, where a time rate-plus-bonus system is in effect; and at the mill's blast furnace department, where the "work norm — output target" system of piece rates-plus-bonuses is used. The data are for September, 1958 (% of total).

	Coking Department	Blast Furnace Department
Principal earnings	100.0	100.0
Including:		
Basic rates	82.7	78.5
Bonuses for target fulfillment and over fulfillment	13.6	13.9
Piece rate supplements	—	0.4
Other payments	3.7	7.2

Changes in Proportion of Workers on Time Rates, Straight Piece Rates, Progressive Piece Rates, Piece Rates-Plus-Bonuses, and Time Rates-Plus-Bonuses
(in % of total number of workers)

Industry	Proportion of Workers on Various Wage Systems									
	Time Rates		Straight Piece Rates		Progressive Piece Rates		Piece Rates-Plus-Bonuses		Time Rates-Plus-Bonuses	
	Before wage revision	After wage revision	Before wage revision	After wage revision	Before wage revision	After wage revision	Before wage revision	After wage revision	Before wage revision	After wage revision
Iron and steel	1.8	2.8	16.7	16.4	44.5	6.5	8.4	41.1	28.6	33.2
Non-ferrous metals	14.0	12.2	30.5	11.8	26.7	1.7	5.3	28.8	23.5	45.5
Chemicals	4.1	4.5	32.2	16.9	15.0	0.2	11.4	19.2	37.3	59.2
Cement	18.0	14.2	40.3	22.0	28.5	1.0	10.5	43.3	2.7	19.5
Precast reinforced concrete	9.2	5.0	60.9	15.9	20.3	1.0	1.4	53.4	8.2	24.7

Changes in Structure of Supplements to Basic Wage Rates for Piece Workers
(% of total supplements)

Industry	Total Supplements		INCLUDING					
			FOR OVERFULFILLING QUOTAS				Bonuses	
					Including extra pay at progressive piece rates			
	Before wage revision	After wage revision	Before wage revision	After wage revision	Before wage revision	After wage revision	Before wage revision	After wage revision
Iron and steel	100	100	79.9	53.4	27.8	5.0	20.1	46.6
Non-ferrous metals	100	100	92.2	47.6	30.2	2.8	7.8	52.4
Chemicals	100	100	56.4	46.6	4.9	—	43.6	53.4
Cement	100	100	91.8	58.2	16.8	1.6	8.2	41.8
Precast reinforced concrete	100	100	98.4	70.6	8.9	1.1	1.6	29.4

ne wages of both time and piece workers con- basically of two parts: basic wage rates and ıses for attaining and exceeding production tar- . Earnings are largely determined by the de- e of target fulfillment. The same basic rates requirements for bonus payments are applied oth time and piece workers. Hence, time rate es involve payment by results, just as piece wages do. The development of wage systems igidly controlled, continuous flow processes s to eliminate the difference between piece and e wages by raising the role of bonuses. The dif- nce between calculating piece and time wages ıcreasingly becoming a mere matter of form. alculating piece wages under the "work team — ut target" system the basic rate is multiplied ne percentage of target fulfillment, and the ıs accruing from the respective fulfillment of arget is added to the derived sum. Under time es the bonus is added directly to the basic wage for the given time period. In both cases the ulation of earnings is extremely simple and rly understood by the workers. This avoids need to revise work norms and piece rates when oducing organizational and technical measures. effect of these measures will be expressed in magnitude of the work assignment, thereby inating any automatic increase in earnings as uctivity rises due to technical improvements. nder the new wage systems the degree of ful- ent of output targets is the decisive factor in ssing the performance of workers employed in principle sections. Bonuses for target fulfill- t and overfulfillment are customarily reckoned or single shifts but for all shifts combined on daily schedule.

ne effectiveness of this method of payment in- ses with the growing improvement of continu- flow production processes. Thus, in steel pro- ion, as open hearth furnace operations are in- ified, it becomes increasingly difficult to rentiate between the results of the work of in- dual teams operating a single unit in shifts. r the "work norm — output target" system, nly the bonuses but even the piece wages of our shifts are often calculated on the basis of urnace's total output. This stimulates the de- oment of a spirit of collectivism and mutual aid ng the workers, and broadens the range of their uction interests.

important shortcoming of existing wage sys- which provide bonuses for the attainment of t targets is that they do not adequately stimu- better quality of output. Only a few enterprises Serp i Molot Steel Mill, the Gigant Cement Fac- and others) have established differentiation of bonuses depending on the quality of the group's performance. The experience of these enterprises is of great importance for the further improvement of wage systems. Technical progress increases the volume and cost of equipment per worker. This enhances the role of material incentives in improving the quality of output, saving of materials, and effectively using technical facilities. Bonuses for the achievement of output targets should be combined with incentives to improve quality factors which depend on the workers. It is evidently along these lines that further improvement of wage systems will proceed.

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Although the three wage systems reviewed above are similar, there are certain differences among them. The experience of enterprises where they have been applied shows that selection of one of the three systems depends largely on the technical level of production and the specific features of the technological process.

On strictly controlled technological processes with a precisely fixed schedule, time wages have been adopted. Piece work here was a fiction. Thus, the productivity of coking ovens is determined by the composition of the charge, the capacity of the chamber, and the heating schedule, which in turn is affected by the condition of the brickwork, the "age" of the oven, etc. The main function of the workers here is to ensure that the technological process runs smoothly without any violation of the established parameters. Piece work here is contrary to the nature of the job.

Yet, until the wage revision, workers on coking ovens were paid at progressive piece rates. And the work norms as well as the level of their fulfillment remained unchanged for years. Thus, at the Kuznetsk mill, throughout all of 1956 and the first nine months of 1957, the work norms on the first and second blocks of ovens were fulfilled by 110%, and on the third block, which was commissioned later, by 111%. Deviations from these levels did not exceed a few tenths of one per cent. The work teams were kept low in order to ensure a given level of wages. Now, with the new basic wage rates, there is obviously no justification for piece work on such jobs. Here the time rate-plus-bonus system is the most suitable one.

The "work norm — output target" system is applied primarily on highly mechanized operations where control is inadequate to adopt time wages.

The factor that induced a number of enterprises to adopt the "work norm — output target" system was the substantial and unwarranted gap between these two wage payment factors. This gap made the workers' earnings unstable and violated the

planned relationships between productivity and wages. Workers often received no bonus because their unit as a whole fell short of its production target, though they themselves had fulfilled their work norms; or because their work norms were higher than the production target and were not fulfilled even when the target was exceeded.

Both the work norms and output targets must be based on technically sound standards of equipment productivity which are periodically revised with due regard for new technology and methods of production. In practice, however, because of differences in methods of calculating work norms and output targets, there are substantial discrepancies between them. Thus, in the iron and steel industry, special accounting units based on man-hours required for the production of different grades of pig iron, steel and rolled metal are used in setting work norms, while output targets are calculated in physical units (tons).

Steel output is planned with due regard for changes in the productivity of the open-hearth furnaces as a result of their "age" (the time elapsed since the last capital overhaul). Although furnace productivity during a campaign changes by 10 to 12%, this fact is ignored in setting work norms, and the latter are based on average furnace productivity during a campaign. In modern conditions, work norms usually differ from output targets by 5 to 7%. Consequently, in the early period of a campaign, when the productivity of blast furnaces is at its highest, the work norm is usually lower than the output target, and it is higher in the later period.

There is a still greater discrepancy between fulfillment of work norms and output targets in the rolling departments of iron and steel mills. Annual output programs are based on rolling capacity reckoned in tons of a definite assortment. During the year, however, there are months when the actual assortment, governed by orders from Glavmetallosbyt, differs from the planned (average annual) one. While the variations in weight are insignificant, the man-hours required differ in different months by some 10 to 12%.

Differences in methods of setting work norms and output targets and of recording their fulfillment inevitably result in a gap between them, with a tendency for this gap to widen. To avoid the shortcomings in wage administration that existed before wage revision, work norms as an independent measure of performance have been discarded and fulfillment of output targets have been adopted as the sole quantitative measure of successful work.

In contrast to work norms, the degree of fulfillment of output targets varies slightly. This ensures constancy and stability of workers' earnings. Output targets are based on specific conditions of supply and sale. Their attainment is ensured by correct scheduling of the operation of equipment and shops, and by mobilizing ever new resources for expanding and improving productio This distinguishes them favorably from work nor which, owing to their stability for relatively long periods, are to some extent based on outdated methods. Payment on the basis of output target f fillment focuses wage administration on carrying out the production program, furthers the nationwide emulation movement for the early fulfillmer of the Seven-Year Plan.

A shift to wage payment according to output ta get fulfillment requires an improvement in produ tion planning and a comprehensive scientific anal ysis of the potentialities of each piece of equipment. At the Kuznetsk iron and steel mill, the "work norm — output target" system is based on the accurate calculation of the rated pig iron and steel output tonnage of each furnace. Thus, for example, to determine the normal time required melt steel, time studies were made of more than 10,000 melting operations. The standards used for calculating the rated productivity of the furnaces take into account the different man-hours required for the production of diverse grades of steel and the effect of the "age" of the furnaces o their productivity. All production planning is based on such standards, with due consideration the changes in furnace productivity achieved by organizational and technical measures.

What distinguishes the "work norm — output target" system from the time rate-plus-bonus system is the fact that under the former the work er is not guaranteed any basic rate pay if actual output falls short of the target. Hence, unlike tin wages, the "work norm — output target" system should be applied to highly mechanized operation where the technological process itself does not strictly control the volume of output. This plan precludes the possibility of divergence between work norm and output target. Under an ordinary piece rate plan such a divergence is possible and can impair the quality of work norms, with all th resulting defects in wage administration.

***

The new system of incentives in the metallurg cal and a number of other industries is not some thing accidental or exceptional, something occasioned by local conditions. Though in most lin of production an ordinary piece wage system is t main incentive to higher productivity, the new sy tems are widely applicable. They should be thoroughly studied to find the best ways of

oving wage administration on highly mecha-
, continuous flow technological processes in
dustries.

th the mechanization of technological proc-
the worker's job increasingly becomes a
al activity — it involves calculation, control
egulation of production, adjustment of instru-
s and machines. Higher output is now achieved
arily by intensifying production processes, by
rly directing them, by improving machine
rmance, by the workers advancing their skills.
asis for measuring the expenditure of physi-
bor in terms of the number of pieces pro-
— which is a prerequisite for piece wages —
adually disappearing. Whereas formerly out-
as increased largely by the worker's intensi-
ffort, increased output is now achieved large-
technical improvements and inventions which
n labor.

is, however, does not mean that the dependence
oduction on the worker's activity disappears.
e contrary, it increases as the worker is given
nsibility for more technical facilities, and as
facilities become more complex and costly.
ividual worker performance can now be meas-
only by the over-all results. This reflects the
ss of the collectivization of labor with the
opment of technology and better organization
oduction. A major feature of this process is
ssening of variations in individual produc-
.

e development of incentive wages without, or
y without, supplements to regular piece rate
ngs, the increasing role of bonuses, the adop-
f output targets as the basis of wage payment,
ll natural results of the growing precision of
ological processes.

e new wage systems are being introduced first
in industries where chemical, continuous flow
sses predominate. But even in industries
predominantly mechanical-technological proc-
there are trends toward the adoption of simi-
age systems as mechanization and continuous
production expand. With modern complex ma-
s and automatic lines taking the place of in-
al tools, the possibilities for the worker to
his individual output disappear. His produc-
is determined by the general rhythm of the
line, by the need for the coordinated opera-
f a system of machines, by the level of col-
e efficiency in handling modern technical facil-
Ever greater importance is assumed by
vance of established schedules, tempos, and
s of processes; by workers' mutual aid and
cement. Setting work norms to measure the
dual worker's effort is gradually becoming unnecessary. The production target is the correct measure of the workers' collective performance on mechanized continuous flow processes.

At the highest stages of technological development, on fully automated processes where the time expended per unit of output is strictly fixed by the motion of the machines (determined in advance by the parameters of chemical reactions), time rate-plus-bonus systems are the natural method of remuneration.

Continuous technological progress gradually makes for a shift from piece work to the time rate-plus-bonus system. The "work norm — output target" system is the last stage in the gradual elimination of the difference between piece and time work systems.

A question of both practical and theoretical importance is that of the objective causes of the gap between work norms and output targets, as well as the factors which determine the size of this gap. This question should be resolved by analyzing the changes in the character, content and organization of work stemming from technological progress. The more primitive are the work tools, the more important are the worker's individual characteristics: his physical strength, skill and speed. There are much greater differences in productivity among workers on manual and individual-unit jobs than in mechanized, continuous flow mass production. This may be seen by comparing the fulfillment of norms by piece workers employed on the main equipment in rolling shops and those engaged there on manual operations. The relevant data from the Magnitogorsk iron and steel mill for January, 1959, are given in the table shown on the top of the following page.

While norm fulfillment on the main equipment ranges between 100 and 115%, the variation in individual productivity of piece workers on manual jobs is much greater. Nearly half of them surpass their norms by more than 25%; 7% of them fall short of their norms. If, in order to reduce the gap between work norms and output targets, the norms for piece workers on these jobs were increased by 10% without altering organizational and technical conditions, then some 30% of the workers in the shingling department and 60% in the shape rolling department would not fulfill the new norms and, consequently, their earnings would drop below the basic wage rates. In actual practice, however, work norms are usually set at a level attainable by the overwhelming majority of the workers. This makes for a relatively high average per cent of norm fulfillment and, hence, for a considerable discrepancy between work norms and output targets. That is why even after wage systems have been

Department and group of workers	Number of workers according to % of norm fulfillment								
	90	90-100	100-105	105-110	110-115	115-120	120-125	More than 125	Tota
A. Shingling Department									
1. Workers on main equipment	—	—	—	480	360	—	—	—	840
2. Other piece workers	8	31	10	201	3	8	98	479	838
B. Shape Rolling Department									
1. Workers on main equipment	—	—	227	362	169	—	—	—	758
2. Other piece workers	15	24	99	104	31	10	16	126	425

revised and the proportion of basic rates in total earnings has increased, the percentage of norm fulfillment continues to differ among different industries, depending on their technical level. It likewise differs among sections within a single enterprise. This can be illustrated by the Kuznetsk iron and steel mill which initiated the "work norm — output target" system in 1958 for workers on main equipment. After the wage revision the average rate of norm fulfillment ranged between 100 and 102%, while on punching (manual) operations and in machine shops it reached 125 to 134%.

The new wage systems, which are designed to narrow the gap between output targets and work norms, are applied only to the workers employed on the main equipment. At the Kuznetsk iron and steel mill only about 12% of all piece workers are on the "work norm — output target" system. As long as only a part of the main production processes are mechanized and automated the scope for the application of this plan is rather limited.

The extent to which workers' productivity diverges from the established norms, and the si of the gap between norms and production targets differ at each stage of the development of machi ery, technology and the organization of produc- tion. These quantitative differences objectively make for qualitative changes in wage administra tion; for different methods of setting work norm different standards of wage payment, different i centive systems, different wage structures, dif- ferent mechanisms for regulating wage levels. search on the types of wage plans which are bes suited to different stages of technological progr is an important element in a scientific solution the problems of improving wage administration, establishing valid principles of planning averag percentages of norm fulfillment, devising the m rational indices, systems and procedures of wa payment, determining the proportion of basic w rates in total earnings, and the best ways of reg lating the relationships between the growth of p ductivity and wages.

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Vneshniaia Torgovlia, No. 10, 1960

LAKSIN:

iitful Cooperation Within the Council for

onomic Mutual Assistance

e rapid development of the national economies e socialist countries has given rise to an in-se in their requirements for ferrous metals. is connection, the iron and steel industry has rgone considerable growth. For example, production increased as follows between the ar period and 1959: 230% in the Soviet Union, in Hungary, 320% in Poland, 170% in the Ger-Democratic Republic, 390% in Rumania, and 170% in Czechoslovakia. In Bulgaria an iron and steel industry was started from scratch.

The long-range plans for the development of the economies of the member states of the Council for Economic Mutual Assistance envisage a further increase in the production of ferrous metals, as is evident from the following data (millions of tons):

***

	Pig iron		Steel		Rolled products (excluding tubes)	
	1959	1965 (Plan)	1959	1965 (Plan)	1959	1965 (Plan)
Bulgaria	0.2	0.7	0.3	0.9	0.2	0.7
Hungary	1.1	1.6	1.8	2.4	1.1	...
GDR	1.9	2.2	3.2	4.6	2.5	3.5
Poland	4.4	7.1	6.2	9.3	4.1	6.4
Rumania	0.8	2.0	1.4	3.3	1.0	2.0
USSR	43.3	65-70	59.9	86.91	47.0	65.70
Czechoslovakia	4.2	7.6	6.1	10.5	4.0	7.3

he establishment of a ferrous metals industry lbania, which today has no metal industry, is envisaged.

n important factor in accelerating the rates in defining the direction of development of iron and steel industry in the socialist coun-s is the broadening and strengthening of eco-ic collaboration among them. This makes pos-e the most economical utilization of raw mate-s and other resources, as well as the output acities of the iron and steel industry in all the alist countries, and the combination of the luctive efforts of the individual countries. he economic collaboration of the member states of the Council for Economic Mutual Assistance and the other socialist countries in various branches of the economy, and specifically in the iron and steel industry, constitutes a fundamentally new type of international economic tie, one determined by the very nature of the socialist method of production. It differs fundamentally from the "collaboration" of the capitalist countries of Western Europe in the coal and iron-and-steel industry under the European Coal and Steel Authority. The great monopolies of the states participating in the ECSA engage in bitter competitive battles over prices, production quotas and volume of capital investment which become more acute in

the period of overproduction crises. Protection of monopoly profits by the device of various barriers which render the import of commodities from other countries difficult, and the economic suppression of the weak by the strong — these are the principles of "collaboration" among the member states of the ECSA.

In contrast, the economic ties among the member states of the CEMA in the iron and steel industry are based on the principle of common gain and brotherly mutual aid, on the principles of proletarian internationalism.

The collaboration of the socialist countries in this field has gone through a number of stages. In the first years of the existence of the world socialist system it was limited to mutual shipments of raw materials, other supplies and equipment for the iron and steel industry in accordance with commercial agreements. As the world socialist system became stronger, and the basis of the iron and steel industry of the socialist countries expande in terms of technology and capacity, their collab oration in this field began to embrace the sphe of production to an increasing degree. However trade still continues to be the most important fo of economic relationships among the member states of the CEMA in the field of iron and steel

The problem of assuring a growth in the prod tion of ferrous metals in the member states of t CEMA has given rise to a sharp increase in raw material requirements for the iron and steel ind try. The inadequacy of raw material resources particularly of iron ore, in the European people democracies, makes it necessary to cover a por tion of these requirements by imports.

During the period from 1950 through 1958 the percentage of imported iron ore to the totalamo required increased, reaching the following level (% of actual weight) (1):

***

	1950	1955	1958	1959
Hungary	57.9	74.0	82.1	79.4
GDR	1.0	42.6	54.4	55.1
Poland	72.4	70.5	72.6	75.5
Rumania	43.3	...	56.0	...
Czechoslovakia	57.7	61.1	64.9	68.0

It is evident from this table that imports play a decisive role in supplying raw materials for the iron and steel industry of the above countries. The bulk of the iron ore imported by the European people's democracies is provided by the Soviet Union. In 1955 the Soviet Union shipped 8.8 mil tons of iron ore to the member states of the CE and in 1959 — 13.2 million tons.

Imports of Soviet Iron Ore by European People's Democracies

(thousands of tons)

	1955	1958	1959
Hungary	1,255	1,589	1,611
GDR	1,236	1,752	1,964
Poland	3,074	4,003	4,187
Rumania	237	716	803
Czechoslovakia	3,015	3,700	4,636

In the years immediately ahead the continued planned rise in iron and steel production in the member states of the CEMA will result in a further increase in Soviet deliveries of iron ore under agreements already concluded. Thus, in 1965, Czechoslovakia will receive 10.1 million tons co pared to 3.7 million in 1958. The Soviet Union will ship more than 35 million tons of iron ore t the Polish People's Republic in the years 1961 t 1965. The average annual scale of Soviet export

n ore to Poland during this period will thus
itute more than 7 million tons compared to
illion in the period 1955 to 1958. In the years
diately ahead there will also be an increase
iet deliveries of iron ore to the GDR, Hun-
and Rumania.
ong the socialist countries of Europe, Bul-
— in addition to the USSR — is an exporter
n ore to the member states of the CEMA.
launching operations at the new ore mine at
ikovtsy, the export of Bulgarian iron ore to
ember states of the CEMA will increase.
will also be an increase in shipments of fer-
nickel ore from the Albanian People's Repub-
these states. Considerable assistance to Al-
in the processing of these ores will be given
echoslovakia, the GDR and Hungary, which
upply her with mining equipment and will
out surveying and prospecting operations.
expansion of economic collaboration among
cialist countries in the iron and steel indus-
also manifested in an increase in shipments
tallurgical coke and coking coals. Of the
ean people's democracies, only Poland and
oslovakia are able to meet their own coke
ements out of their own production. Bul-
Hungary, the GDR and Rumania cover a sub-
al portion of their coke requirements by im-
from other socialist countries.
largest supplier of coke to the member
of the CEMA is the Soviet Union. In 1959
SSR exported 2.1 million tons of coke to these
ies, including more than 140,000 tons to Bul-
over 560,000 tons to Hungary, about a mil-
ns to the GDR, and nearly 420,000 tons to
nia.
ignificant role in supplying coking coal and
o the developing iron and steel industries of
ropean socialist countries is also played by
l and Czechoslovakia.
re is an expanding interchange of various
s of coal among the member states of the
both for coking and for power purposes.
oslovakia, for example, has increased its de-
es of coking coal to Poland in exchange for
coal in recent years. The shortage of the
t grade coking coal in Poland is covered by
ents from the Soviet Union, whereas Poland
supplies considerable quantities of coking
f grades in which its output exceeds its own

merce among the member states of the
also plays an important role in providing
ron and steel industries with such types of
aterials and supplies as chromium and man-
ores, ferro-alloys, and refractory material.
Thus, Soviet supplies provide virtually the entire Polish and GDR requirements in chromium ore. Moreover, the USSR supplies considerable quantities of manganese ore and ferro-alloys to the European people's democracies. The suppliers of auxiliary types of raw materials and other products to the iron and steel industries of these countries also include Bulgaria and Rumania, which export manganese to other socialist countries, and the Czechoslovakian Socialist Republic, which exports magnesite, refractory products, etc.

In connection with the rapid growth of their economies, with socialist industrialization, and also with the mechanization of agriculture, the needs of the European people's democracies for iron and steel are increasing considerably from year to year, and despite the considerable growth of the iron and steel industry their needs are not entirely met by domestic production. The increasing need of these countries for iron and steel imports is a primary factor in the continuous expansion of their trade in these commodities.

Thus, trade in rolled steel products among the member states of the CEMA rose from 1.2 million tons in 1955 to 2.2 million in 1958. Trade in iron and steel tubes also increased.

The agreements which have been concluded envisage a further marked increase in trade in iron and steel among the member states of the CEMA. This will be particularly facilitated by an increase in the export possibilities of a number of these countries in certain types of iron and steel products. Thus, in Poland for example, the excess in the production of rolled steel products over the consumption thereof rose from 95,000 tons in 1950 to 200,000 tons in 1958; in Czechoslovakia the increase was from 150,000 to 300,000 tons, and so on.

Another factor having an increasing influence upon the development of the iron and steel trade among member states of the CEMA is the extension of specialization and cooperation in production in the iron and steel industries of these countries. Thus, in accordance with the planned specialization in the production of rolled iron and steel, a further development of the exchange of certain types of rolled steel products and tubes among the member states of the CEMA is envisaged. Hungary, for example, is planning to ship heavy steel sheets to Czechoslovakia in the period 1960 to 1965 in return for billets. Poland will exchange hot- and cold-rolled sheet for Czechoslovak rolled sections. Various types of rolled products will also be exchanged between the GDR on the one hand, and Poland and Czechoslovakia on the other, between Rumania and Hungary, Bulgaria and Rumania. The

Soviet Union, increasing its shipments of various types of rolled products to other member states of the CEMA, will obtain tube billets from Rumania in exchange for seamless tubes.

Collaboration is also proceeding in the development of the production and technological base of the iron and steel industry. This collaboration is implemented through the mutual exchange of plans for the building and reconstruction of iron and steel enterprises and of their individual units, and also in the form of joint prospecting and research operations to expand the fuel and raw materials basis of the iron and steel industry, etc.

The Soviet Union is extending major assistance in the development of this branch of industry in the member states of the CEMA. Soviet designing organizations have carried out a great deal of work in designing major enterprises of the iron and steel industry in these countries. For example, the first unit of the V. I. Lenin Iron and Steel Mill in Poland, with an annual output of 1.5 million tons of steel, was built according to Soviet designs. This considerably exceeds the combined capacity of all the iron and steel mills in prewar Poland. Soviet organizations are now preparing the plans for the expansion of this combine. It will melt 3.5 million tons of steel in 1965.

Soviet technological documentation was employed in Czechoslovakia for the construction of the rolling mills of the Klement Gottwald Iron and Steel Mill in Kunchits, as well as for the erection of the country's first continuous-pouring installation. Soviet designs were also used to build the V. I. Lenin Iron and Steel Mill in Bulgaria and a number of projects in other countries.

Czechoslovak experts, having thoroughly familiarized themselves with the construction of the V. I. Lenin Iron and Steel Mills in Poland, are now making use of this experience in the expansion and reconstruction of their iron and steel enterprises.

The planning organizations of the socialist countries are also constantly expending their collaboration in the planning of new, highly productive machinery and equipment for the iron and steel industry. At present, for example, Czechoslovak and Soviet experts are jointly developing a design for a most advanced type of planetary rolling mill.

Another form of collaboration among the member states of the CEMA in developing the production and technical base of the iron and steel industry consists of mutual deliveries of equipment for this sector. Soviet deliveries of equipment for complete metallurgical enterprises are of considerable importance. Soviet machines equip the largest iron and steel mills of these countries, and particularly the V. I. Lenin Steel Mill and the Warsaw Special Steel Mill in Poland, the V. I. Lenin Iron and St Mill in Bulgaria, the tube mill at Roman in Rumania, and others. In the next few years the So viet Union will extend assistance in the designi and delivery of equipment for the rolling and st melting departments of such enormous enterpri as the Stalin Iron and Steel Mill in the GDR, the Kremikov Iron and Steel Mill in Bulgaria, the E Slovakian Iron and Steel Mill in Czechoslovakia the iron and steel mill at Galati, Rumania, and on.

The governments of the European people's de mocracies which have at their disposal an adva machine-building industry (GDR, Czechoslovaki are also taking an active part in the expansion the productive capacities of the iron and steel i dustries of their fraternal countries. Thus, in 1957, Czechoslovakia shipped the Soviet Union a 10,500 tons, and in 1959, over 8,500 tons of mo rolling-mill equipment, while the GDR shipped 21,700 and 9,200 tons, respectively.

A continuous merchant mill of about 500,000 capacity per year — one of the largest in Europ — is now being erected at the iron and steel mi Trshinets, Czechoslovakia. The equipment of t mill, the total weight of which approximates 12, tons, was manufactured in enterprises of the Ge man Democratic Republic. GDR experts are pa ticipating in the installation and adjustment of t mill.

In recent years there has been considerable progress in scientific and engineering collabora tion among the member states of the CEMA in t iron and steel field. One of the numerous form this collaboration is the mutual exchange of des criptions of technological processes and other technical documentation.

In the years from 1947 to 1958 the iron and s industry of Czechoslovakia obtained technologic documentation on 431 items from Soviet organi tions. In Czechoslovakia, Soviet documentatio made possible the establishment of the manufac ture of ferro-alloys, extra-large ingots up to 2 tons in weight for heavy forgings, sinter of spe fied basicity, chrome-magnesite brick for linin steel-melting furnaces, and the melting of spec steels in large open-hearth furnaces. The Poli and Hungarian iron and steel industries are usi the experience of the GDR in the production of metallurgical coke for poor-coking coals. Cze slovak and Polish engineers have worked jointl and exchanged experience in the production of coke, wrought iron, certain rolled products, et

The socialist countries are engaged in an ev widening exchange of experience and achievem in the introduction of advanced engineering

esses into the iron and steel industry (utiliza-
f gas at high pressures beneath the throat of
last furnace, higher blast temperature, blast
nstant humidity, the use of radio-isotopes to
ol and monitor the work of assemblies, etc.).
effective form of scientific and engineering
oration among the fraternal countries is the
al exchange of experts to study production ex-
nce and to exchange scientific and engineering
ience. For example, Czechoslovakia sent 466
ts to the Soviet Union in the period from 1947
58 to study technical problems in the iron and
industry.
o widely employed is the form of collabora-
epresented by the training of specialists and
ers of one socialist country in another. A
derable number of engineers, technicians and
d workers from the people's democracies
been trained in the USSR. The future staffs
Bulgarian Lenin Iron and Steel Mill, the
Iron and Steel Mill of the GDR, and other
prises in various countries acquired their
ical experience in Soviet enterprises.
day, when scientific research has assumed
portant role in the development of industrial
ction, an expansion is taking place in the
t collaboration of the scientific institutions of
cialist countries, accompanied by a coordina-
f their research plans, the joint solution of
us engineering problems, including those in
eld of the iron and steel industry. This makes
e more efficient utilization of the possibilities
scientific research institutions of the various
ries, an economy of funds and, above all, a
tion in the time required for the solution of
us problems. This is particularly important
e purpose of gaining time in the competition
socialist countries with capitalism.
the economic collaboration among the so-
t countries is strengthened, the economic ties
g them come to embrace the sphere of produc-
o an ever increasing degree. The need to
nate unnecessary parallelism in the produc-
f various types of products of the iron and
industry, to improve the utilization of raw
ial resources and other supplies, and of pro-
e capacities in these countries, has led to the
or direct coordination of their production pro-
s and capital investment plans. The CEMA as
s its standing committee on economic and
ific collaboration in the iron and steel indus-
performing important work in this direction.
borating plans for the development of the
nd steel industry, the member states of the CEMA take into consideration the recommendations worked out by this committee and adopted at the sessions of the CEMA.

An important role in strengthening direct production ties among the member states of the CEMA in the field of iron and steel is played by the bilateral agreements they have concluded with respect to economic collaboration, as well as the measures worked out by the standing bilateral commissions on economic collaboration. For example, the standing Czechoslovak-Polish committee has developed measures for extending collaboration in the production of rolled steel products in both of these countries, in the development of coal production in Poland, etc.

On the basis of recommendations by the CEMA, a foundation has been laid for specialized utilization of rolling equipment in the European people's democracies to produce specific types of rolled metal. A result of this specialization is the elimination of the need for frequent changing of rolling mill rolls and, consequently, better utilization of their capacities and a reduction in production costs. There is also a constant expansion in cooperation among the member states in production. This is expressed, specifically, in the mutual supply of billets to their rolling mills for the purpose of fuller utilization of the excess capacities that exist in various countries.

Specialization and coordination in production, particularly in the iron and steel industry, is one of the forms of direct production ties among the socialist countries and represents a further deepening and improvement of the division of labor among them, a new and higher stage in the development of economic collaboration.

It must be stated, however, that only the first steps have thus far been taken in specialization and production cooperation in the iron and steel industry among the member states of the CEMA. A more complete utilization of the advantages of the international socialist division of labor in the iron and steel industry is a major additional source of increased iron and steel production, reduced production costs, and increases in the productivity of labor in this important branch of the economies of the socialist countries.

Footnote

(1) The computation is based on data on the visible consumption of iron ore (mining plus imports, minus exports).

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Nauchnye Doklady Vysshei Shk
Ekonomicheskie Nauki, No. 2, 1

I. RABINOVICH:

Soviet-American Trade Relations From 1923 to 1933

Development of peaceful relations and the consolidation of economic ties with all states is the immutable foundation of the Soviet Union's foreign policy.

The 21st Congress of the CPSU, which equipped the Party and the people with a magnificent program for the country's economic and cultural development in the next seven years, once again stressed the need to continue a peaceful foreign policy and to do everything possible to ensure peaceful coexistence and international cooperation of countries with different social systems. The Congress emphasized that a normalization of the international climate could be promoted to a decisive degree by an improvement in relations between the USSR and the United States, the two great powers which bear special responsibility for the peace of the world.

The Soviet Government has consistently and steadfastly implemented the directives of the 21st Party Congress. The visit of N. S. Khrushchev to the United States on a mission of friendship and peace has been an important contribution to strengthening peace among all peoples, above all between the peoples of the USSR and the United States. In his speeches, meetings and conversations with representatives of the most diverse groups in the United States, N. S. Khrushchev conclusively demonstrated the sincerity of the Soviet Union's peaceful policy. He devoted particular attention to his statements to improving relations between the USSR and the United States.

"We are in favor of improving Soviet-American relations because we believe it to be in the interests of both nations. The establishment of friendly relations between the USA and the USSR would be an important step toward strengthening world peace and good relations among all peoples." (1)

The normalization of relations between the USSR and the United States is of advantage to both countries and meets the aspirations of both peoples. This explains the exceptional interest shown by the American people in our country during the visit of N. S. Khrushchev and other Soviet statesmen to the USA and also the growing interest of American business circles in expanding economic relations with the USSR. This is also demonstrated by th history of Soviet-American economic relations.

In the present article we shall examine how e nomic cooperation between the Soviet Union and the United States developed in the period betwee 1923 and 1933, that is, the period preceding the establishment of normal diplomatic relations be tween the two countries.

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From its very first days the Soviet state has persistently sought to establish good-neighborly relations with all countries, to maintain mutuall advantageous economic ties with them. "We wil gladly accept good-neighbor terms and economi agreements," V. I. Lenin said at the 2nd All-Russian Congress of Soviets. (2)

Special importance was attached to the estab- lishment of cooperation between the Soviet Repu lic and the United States, the principal capitalis country. In an interview given to a corresponde of the Chicago Daily News in 1919, Lenin said: "We stand resolutely for economic understandin with America, with all countries, but especially with America." (3) Lenin once again stressed t same idea in an interview given to a correspond ent of another American newspaper, the New Y Evening Journal. "Let the American capitalists bother us. We shall not bother them. We are r even to pay them in gold for machinery, tools, e useful for transport and industry, and not only i gold but in raw materials as well." To the cor- respondent's question whether Russia was read enter into business contacts with America, V. I Lenin replied in the affirmative: "Of course, w are ready, just as with all countries." (4)

The Soviet state has repeatedly declared its willingness to cooperate with the United States. Such proposals were contained in the letter of t People's Commissar of Foreign Affairs to the American consul in Moscow, Mr. Pool (August 6, 1 in the note addressed to President Wilson of th United States (October 24, 1918); in the draft tr drawn up with William Bullitt (March 12, 1919); the address of the All-Russian Central Executi Committee to the US Congress (March 20, 1921 and in a number of other documents. In its

ss to the US Congress, the All-Russian Cen-
xecutive Committee stressed that the ab-
of proper business relations with America
ed especially abnormal to Soviet Russia
as harmful to both peoples. (5)
the peaceful proposals of the Soviet Republic
turned down by the United States. American
ialism was one of the organizers and in-
s of foreign military intervention and of the
mic blockade against our country. Having
ed defeat in open armed combat, it did not
he struggle against the Soviet state but shifted
he economic sphere, seeking to hamper the
ation of the national economy, to retard and
cialist construction. For 16 years, up to the
n of 1933, the United States obstinately re-
to establish normal political and economic
ons with the Soviet Union.
reactionary policy of US ruling circles
sely affected the establishment and develop-
of economic links between the United States
e USSR. But it could not arrest the objective
sses in the American economy which im-
part of the business world to stimulate and
p economic ties with the Soviet Union. Rela-
etween both countries gradually broke
h various obstacles and developed along three
foreign trade, concessions, and technical as-
ce by large American firms in the construc-
industrial enterprises in the USSR.

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sian-American trade prior to the First World
as unstable and relatively small. Russia
modest place in the foreign commerce of the
States: its share in American exports
ted to 1 or 1.1% and was even smaller in im-
In 1913 Russia imported from the United
goods valued at 79.4 million rubles — 5.8%
total imports — and exported to the United
goods valued at 14 million rubles, or 0.9%
exports. (6) Trade ties between both coun-
increased noticeably during the war, chiefly
orts which rose substantially as a result of
ge requirements of Russia for armaments
ar supplies. Between 1914 and 1916 Ameri-
xports to Russia increased from 26.9 million
million, or over 17 times, (7) exceeding the
of Britain and France in Russia's imports.
ing the years of foreign intervention trade
en the two countries actually stopped. But
fter the failure of intervention economic con-
remained unsatisfactory for a long time be-
of the policy of US ruling circles. However,
oblem of foreign markets was becoming ever
acute for America.
imperialist war of 1914-1918, it will be recalled, resulted in a marked growth in the economic and financial power of American imperialism which made colossal profits on war deliveries to the belligerents. The war greatly extended the foreign markets of the United States and promoted the exceptionally rapid development of its foreign trade. American exports, which in 1914 amounted to $2,071 million, rose to $8,080 million at the end of the war, or by 3.5 times. (8)

When the war ended the vast military market of the United States was sharply curtailed and American exports dropped markedly. In 1921 they declined to $4,379 million, and in 1922 to $3,765 million. (9) The increased postwar demand of European countries for American machinery, equipment and other civilian goods could not halt the drop in exports. In subsequent years, as the European countries restored their economies and again became active in foreign markets, the United States had to make room for them. The sale of its goods encountered increasing obstacles caused by the development of the general crisis of capitalism.

The disproportion between the huge production potentialities and the contracted world market grew sharply after the First World War, as a result of which the marketing of products became one of the main problems of capitalism. It was a particularly burning problem for the United States. Under these conditions the vast Soviet market attracted the attention of a number of capitalist countries and by 1921 the Soviet Union was already trading with 14 states. Those circles of the American bourgeoisie which needed Soviet raw materials and particularly markets for the sale of goods, naturally could not keep aloof and calmly reconcile themselves to the fact that their West European rivals were extending trade with the USSR and had begun to occupy advantageous positions in that market. The press increasingly carried articles and statements by influential people advocating trade with Soviet Russia. Lenin pointed out that "... voices in favor of reaching agreement with Russia are growing in America." (10)

The first steps in developing trade relations between the United States and the USSR were made by the Products Exchange Corporation, organized in 1922, and the branch of Arcos opened in America in the same year. The beginning of broader trade contacts between the two countries dates back to the middle of 1924 when the Amtorg Corporation was organized in the United States. A considerable share of the transactions for the purchase of American goods and the sale of Soviet products in the United States was conducted through Amtorg. In addition to Amtorg (formed by a merger of the Products Exchange Corporation and the New York

branch of Arcos), Centrosoiuz, Selskosoiuz, Rusplatina, the Textile Syndicate and some other Soviet organizations engaged in trading activities in the United States.

In 1924-1925 and 1925-1926 Soviet-American trade exceeded the prewar volume of commerce between the two countries, as shown by the following figures.

Table 1

Soviet-American Trade, 1913, 1923-1926*

	1913	1923-1924		1925-1926	
	million rubles	million rubles	%	million rubles	%
Total Soviet imports	1,374.9	233.5	100	756.3	100
Imports from the USA	79.0	51.0	21.8	122.2	16.1
Total Soviet exports	1,520.1	373.1	100	703.3	100
Exports to the USA	14.1	7.1	0.2	30.7	4.5

* Compiled on the basis of the statistical Survey Vneshniaia torgovlia SSSR za period 1918-1927/28, Leningrad and Moscow, 1931, pp. XVI, XIX.

The table shows that in a brief period trade between the USSR and the United States rose sharply and exceeded the prewar level. The importance of America in Soviet foreign trade, particularly in imports, increased substantially. Whereas in 1913 the share of the United States in our country's imports amounted to 5.8%, in 1925-1926 it reached 16.1% and was exceeded only by Germany (23.2%) and Britain (17.7%).

The increase in the share of the United States in Soviet imports stemmed from the specific nature of imports in the restoration period. The economic and political situation in the country at that time dictated the need for the earliest restoration of light industry and an expansion in the output of consumer goods to supply the urban population, to provide adequate labor power and to satisfy the peasants' requirements. That is why the Party, bending every effort to advance heavy industry, at the same time took determined measures to develop the production of consumer goods.

The foreign trade monopoly made it possible to direct imports into channels fully conforming to the tasks set by the Party. The Soviet state was buying abroad the goods needed to develop industry, agriculture and the welfare of the people. Imports of machinery were growing steadily but in the first years raw materials and semi-manufactured goods predominated; their share in total imports in 1925-1926 was 53.6%. (11) Since cotton and wool held first place in the imports of industrial raw mat rials, and the United States was the main cotto supplier, this determined the increase in the U share in Soviet imports. (See table shown on t top of the following page.)

The main items of Soviet imports from the United States in 1923-1925 were cotton, farm m chinery (including tractors) and some types of i dustrial equipment. In 1925-1926 the share of ton in total Soviet imports from the United Stat was 59.3%. Up to 1929 the United States held a leading place in this item of our imports. Seco place in trade with the United States was held b farm machinery and tractors (12.6%). The Unit States supplied over 90% of all the tractors im ported by the USSR in 1924-1926. These purch were of considerable significance for the Unite States as well, inasmuch as the USSR accounte 20.3% of the American tractor exports in 1925 1926. Imports of machinery expanded, with the USSR advancing during this period from 47th p to 12th place among the consumers of America equipment. The importance of Soviet equipme orders for American industry can be judged fr the fact that in 1925-1926 their share in total e ports of equipment from the United States amou to 17.5% for machinery and apparatus, 24.8% f machine spare parts, and 20.6% for oil equipm (12)

The country's industrialization required shi

Table 2

Soviet Imports of Major Goods from the United States, 1913, 1923-1925*

ears	Total Soviet imports from the United States (million rubles)	Including					
		Cotton		Farm Machinery and tractors		Machinery, apparatus, electrical equipment	
		million rubles	% of total imports from the US	million rubles	% of total imports from the US	million rubles	% of total imports from the US.
1913	79.0	47.4	60.0	8.8	11.1	6.1	7.7
3-1924	51.2	38.9	76.0	0.5	0.9	0.5	0.9
4-1925	122.2	71.4	59.3	15.4	12.6	8.6	7.6

* p. 610 of source shown for Table 1.

nter of gravity to imports of means of pro-
n, chiefly up-to-date machinery and equip-
The radical change in Soviet industrial
ure of its equipment with the latest machinery
ed the need for the extensive utilization of the
dvanced foreign technology. In view of this,
r importance was assumed by our economic
ith the United States. The latter had a power-
chine-building industry and could meet our
s insofar as volume, quality and assortment
oncerned.

et-American trade in 1926-1930 broadened
erably and grew at a faster rate than Soviet
n trade as a whole. Whereas the exchange of
between the USSR and other countries rose by 40% between 1926-1927 and 1930, trade with the United States increased by 85%. (13) According to American statistics, in the period 1926 to 1930 the average annual United States exports to the USSR were valued at $77.7 million, i.e., 3.2 times as much as in the period 1910 to 1914. In 1930, US exports to the USSR reached $114.4 million, i.e., 3.2% of all American exports. United States imports from the USSR, according to the same source, amounted to $24.4 million in 1930. (14)

The role of the United States in Soviet foreign trade, particularly in imports, rose substantially by the end of 1930, as shown by the following figures.

***

Table 3

Share of Capitalist Countries in Soviet Imports, 1926-1927, 1930* (in %)

	1926-1927	1930	Average for 1926-1930
Total Soviet imports	100.0	100.0	100.0
including,			
imports from Germany	22.6	23.7	23.7
imports from the USA	20.4	24.9	21.1
imports from Britain	14.1	7.5	7.3

* Calculated on the basis of data in the source cited in footnote 13, pp. 22, 23, 29.

For a number of years the United States firmly held second place in Soviet imports, and in 1930 it advanced to first place, leaving behind Germany, let alone Britain, which never rose above third place after 1923-1924. The Soviet Union acquired the reputation of a large and reliable buyer of goods from a number of major American industries and in 1929 it maintained business contacts with nearly 2,000 firms, many of whom were working on profitable Soviet orders.

In those years the structure of imports from America changed. Cotton, which held a leading place up to 1929, was relegated to the background. In 1930 it comprised only 7.4% of total Soviet imports from the United States, whereas in preceding years it comprised from one-half to two-thirds. This was a result of the efforts of the Communist Party and the Soviet people to expand domestic cotton production to cover the country's requirements.

Machinery and equipment, including tractors and farm machinery, held a central place in Soviet imports in those years. In 1930 these items accounted for 70% of all Soviet imports from the United States. The growth of imports of tractors, spare parts for them and farm macinery was particularly marked. The share of the United States in Soviet machine-tool imports increased in connection with the rise in purchases of the most intricate machines, manufactured primarily in the United States. In 1930, 4,164 American machine-tools were in operation at Soviet plants, or 36.7% of all the foreign machine-tools installed. By 1931 the number of American machine tools had increased to 5,134. (15)

Parallel with our increased purchases, Soviet exports to the United States expanded. The main items were furs, manganese ore, medicinal raw materials and other goods. In 1925-1926 Russian furs worth 11.8 million rubles were sold in the United States, or 38.1% of all Soviet fur exports. America, however, imported Soviet furs in much greater amounts than is reflected in these statistics. Furs, flax and some other goods of Soviet origin found their way into the United States via London and Leipzig and were included in American statistics as trade with Britain, Germany or other countries. The Soviet Union was one of the main suppliers of manganese ore for the American steel industry. Of the 300,000 tons of manganese ore imported by the United States in 1925, two-fifths came from the USSR. The United States took 41.3% of all Soviet manganese exports in 1925-1926. (16)

Notwithstanding some growth in Soviet exports to the United States, they nonetheless remained at a low level and for a number of years did not make much headway. Whereas imports from the Un States reached $114 million in 1930, our expor to it did not exceed $24.4 million. The USA ac counted for 4 to 5% of total Soviet exports, wh imports from the Soviet Union amounted to onl about 0.5% of total US imports.

There were a number of obstacles to the ex sion of Soviet exports to the United States. Fi America possessed many products similar to which were our main export items in the perio 1923 to 1927. Second, American monopoly gr fearing competition of certain Soviet goods on American market, did everything to prevent th importation. Third, the USSR possessed insuf cient quantities of export goods, since the nati economy was only then being restored and ma branches were poorly developed. The marked of our exports to the United States behind imp from that country hampered the development o our trade relations with the United States.

Thus, in the initial period of industrializatio Soviet-American trade made considerable pro gress. Economic requirements compelled Am can businessmen to pay more attention to our try with its huge natural wealth and exceedingl large market. Their interest in extending eco nomic ties grew especially after some influen American monopolies concluded a number of l trade transactions and technical assistance ag ments with Amtorg and Soviet economic organ tions. The agreement of Standard Oil of New and the Vacuum Oil Company with the Soviet C Syndicate at the end of 1926 for the annual pur chase of 100,000 tons of Soviet oil for three y had great repercussions.

Another important step in this respect was agreement between the General Electric Com and Amtorg for the supply of electrical equipm worth from $21 million to $26 million over a per six years. The agreement was concluded in 19 provided that payment of 25% of the cost of the equipment would be made when the goods were shipped, while 75% was covered by commercia bills to be repaid within five years. This, in was the first long-term credit given by a very large American corporation to Soviet economi ganizations.

The influx of proposals by a number of larg firms for technical assistance agreements wa concrete manifestation of the growing interes American business circles in cooperation wit USSR. Fifty Soviet-American technical assist contracts were in operation on April 1, 1930.

***

The development of Soviet-American econo relations between 1923 and 1933 proceeded u

ons in which, owing to the policy of Ameri-ling circles, no official diplomatic relations l between the two countries. That is why the opportunities for economic cooperation were d to an insignificant extent. The stubborn l of the US Government to establish direct ns with the USSR entailed a number of eco-restrictions which adversely affected So-merican trade.

absence of normal diplomatic relations cally hampered the granting of American to finance export and import operations. ve already pointed out that one of the specific es of Soviet-American trade in this period e sharp lag of our exports to the United behind the imports from that country. The was that the balance of trade was unfavorable for the Soviet Union. The deficit totalled $450 million in the period 1923 to 1930. It was perfectly clear that for the further development of Soviet-American trade it was necessary to increase both short-term and, particularly, long-term credits through the enlistment of American capital.

But American firms and banks were timid in extending credit for export and import transactions with the Soviet Union. In some years credits reached 50 to 60% on certain goods but they were given for a term of not more than 6 or 9 months. Thus, in 1927-1928 Amtorg payments on purchases made for the USSR totalled $33,164,000. Of this sum 60% was paid in cash, credits up to 9 months comprised 21.4%, and one-year credits made up 8.4%. This is shown in the following table:

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Table 4

Share of Different Forms of Payment in Total Payments Made by Amtorg in 1927-1928*
(in % of total)

	Agricultural machinery	Industrial raw materials	Equipment
Cash	55.2	99.6	39.5
Credits up to 9 months	12.6	0.3	38.0
Credits up to 12 months	5.7	0.05	14.7
Credits for a year and more	26.5	—	7.8

* TsGAOR i SS, f. 5240, op. 1, d. 220, ll. 187, 188.

lits extended by firms were particularly According to Amtorg figures they amounted 3 million in 1926-1927, or 16% of the cost of ds shipped to the USSR, and in 1927-1928 to llion, or 18%. (18) A considerable part of dits was given in the form of advances bills of lading and in the form of bills of ge.

in amount and terms American short-term could not be regarded as satisfactory. But ıation was even worse as regards long-term which the Soviet Union particularly needed ears of industrialization. The hostile atti-US government circles toward the USSR, ressure on American banks, and numerous ents of reactionary elements against grant-dit for Soviet economic operations greatly d the granting of long-term credits to the

ecting the opinion of that part of the business world interested in trade with a socialist country, many newspapers came out in favor of the US government creating a legal basis for solving the problem of long-term credits for Soviet purchases. The Journal of Commerce wrote at the beginning of 1929 that the existing form of trade relations with the USSR did not satisfy those businessmen who were making a profit on transactions with the Soviet Union and that they wanted the conclusion of definite agreements, at least in the form of trade treaties.

The opposition of the US State Department to placing a Soviet $30-million railway loan on the American market at the beginning of 1928 was a manifestation of the "tough" line toward the USSR. After the incident with the Soviet railway loan, the US government placed an embargo on the sale of Soviet gold on the American money market. These and other anti-Soviet actions showed that certain circles of the American bourgeoisie,

supported by the government, sought to undermine the sound economic basis which was advantageous to both sides in Soviet-American business relations and to hinder their development.

Unfriendly actions of the American ruling circles with regard to the USSR were particularly intensified during the years of the world economic crisis, when the international situation became aggravated and an aggressive tendency in the policy of capitalist states became more pronounced. It is a fact that during those years the imperialist circles of a number of countries sought a way out of the crisis and the sharpened contradictions by unleashing a new war and launching intervention against the USSR. This is confirmed by the unfolding of an anti-Soviet campaign organized in the capitalist states.

The 16th Congress of the Communist Party, held in the middle of 1930, pointed out that the hatred of the international bourgeoisie for the Soviet state was expressed "... in attempts to organize an economic blockade, in the struggle against Soviet exports, in a campaign by the clergy, in a frenzied, slanderous campaign of the bourgeois and Social Democratic press, in intensified preparations for war against the USSR." (19) Economic aggression, manifested in applying a number of discriminatory measures against Soviet exports, developed on a large scale.

The campaign against the importation of Soviet goods was launched in different countries, the United States included, under the cover of the most brazen demagogy. The Soviet Union was accused of dumping, with the help of which it was allegedly striving to disorganize the economy and destroy the capitalist world. Reactionary forces called for a boycott of Soviet goods which, in the opinion of Business Week, should rest on the employment of force, including military measures if necessary.

In the United States anti-Soviet campaigns against alleged Soviet "dumping" were launched much earlier than in the other capitalist countries; they were organized on a large scale and accompanied by much publicity. Reactionary elements rose up in arms against imports of Soviet goods and energetically sought an embargo on the imports of Soviet manganese ore, matches, sawn timber, asbestos, anthracite and some other goods. Under the pressure of these anti-Soviet forces the Hoover Administration instituted a discriminatory policy against many Soviet export goods in 1930.

Thus, under the guise of combatting the "dumping" of Soviet matches in the United States, import duties were raised from 8 cents per gross to 20 cents, i.e., 2.5 times. (20) Inasmuch as the price of a gross of matches in 1930 ranged from 35 to 37 cents, a duty of 20 cents, or three-fifth of th price, meant nothing else but the institution of prohibitive anti-dumping duty. The hypocritica nature of the charge of "dumping" of Soviet mat was so obvious that even the customs judge, Ch les Kelland, was compelled to admit the goundl nature of the decision of the Treasury Departm which actually imposed an embargo on Soviet matches. It should be noted that the share of th USSR in American imports of matches in 1929 only 10.4% and that the matches were evaluated 34.6 cents per gross, whereas the average cost matches imported into the United States from o er countries was 33.2 cents per gross. (21) W dumping could there be in such a case?

The charge of dumping manganese ore levell against the USSR was also unfounded. The Unit States had no developed manganese mining indu try; the country's requirements were covered b imports to the extent of 92% and by domestic pr duction only to the extent of 8 to 10%. (22) The share of the USSR in American manganese imports reached 49.6% in 1929. (23) It is perfect obvious that under such conditions, when Soviet manganese ore was dominant in the American r ket, "dumping" in general was out of the questi since every one would benefit from it except th USSR.

Under the pressure of interested business groups, the US Government had to give up disc ination against Soviet manganese. The decisio the dumping of manganese ore imported from t USSR, the Secretary of the Treasury Mellon sta was unfounded and must be rejected. (24)

The anti-Soviet campaign against our export was dictated more by political than economic m tives. It is no secret to anyone that a dumping policy, employed by monopoly capital as a wea of ousting competitors and capturing foreign m kets, is precluded by the nature of the socialist tem and runs counter to the laws governing its velopment. Such a policy could not arise in the Soviet Union for a number of reasons. First, u socialist conditions the export of goods, just as their import, is pursued not for the purpose of tracting maximum profits but to further advanc the country's economy and the living standard the people, as well as to strengthen and develo economic ties and cooperation with other count

Second, under socialism the export of goods not an end in itself but a means of payment for ports; it is subordinated to the tasks of socialis construction. A reduction of export receipts w entail a reduction of imports, which in turn wo adversely affect the rates of the country's indu trialization.

rd, dumping presupposes that the losses on
s are covered at the expense of the taxpayer
raising prices in the home market. But such
cy directed against the interests of the people
ossible under socialism, where production
stribution are subordinated to the aim of
g the living standard of the people.
anti-Soviet campaigns launched by reac-
y forces and supported by US ruling circles,
a sharp reduction in American imports of
goods. In 1931 they dropped to $13.2 mil-
n 1932 to $9.7 million (compared to $24.4
n in 1930. (25) The decline was greatest in
se of goods against which a discriminatory
was instituted.
Soviet Government was compelled to take
mic counter-measures against the countries
established a discriminatory policy toward
with USSR. In doing so it proceeded from the
se that peaceful coexistence of states with
ent social systems presupposes full equality
r relations and mutual advantage. Firmly
ng to these positions our state has always
ed that it will not yield to pressure or threats
part of anyone. The economic counter-
res resulted in a decline of our orders in the
States and their placement in countries
the terms were more favorable.
ording to figures of Amtorg, orders and pur-
s by Soviet organizations in the United States
to $51.5 million in 1931 compared to $114.4
n in 1930, or by 55%. (26) Some idea of the
e of our orders in the United States is given
following figures: orders for chemical equip-
n the United States dropped from 1,023,300
in 1930 to 312,800 rubles in 1931, or by
irds. The share of the United States in Tech-
ort orders dropped from 31.2% in 1930 to
in 1931; moreover, from the middle of the
quarter of 1931 this Soviet import organiza-
opped purchases in America altogether, ex-
achinery supplied by Ford. (27) The cur-
nt of Soviet purchases in America greatly
ed American exports to the USSR. In 1932
ropped to $12.6 million compared to $114.4
n in 1930. This happened at a time when So-
rchases became of decisive importance for
ber of American enterprises. At the begin-
f the 1930's the Soviet Union was the main
of the output of the machine-building and a
r of other American industries. In 1931
40% of all US exports of machinery and in-
al equipment went to the USSR, including
metal cutting machine-tools, 74% of the
y equipment, 67% of all American exports of
achinery, etc. (28)

The decline in Soviet-American trade, for which the US ruling circles were to blame, aroused great anxiety among that part of the business world which was interested in economic cooperation with the USSR. Many American businessmen began to press for an improvement in relations between the United States and the USSR. The working people of America energetically demanded a normalization of relations between the two countries. The growing movement for recognition of the USSR, for the development of economic, political and cultural relations ultimately prevailed.

Normal diplomatic relations between the United States and the USSR were established in November 1933, and some time later a trade treaty was concluded. The economic necessity of normalizing relations and developing trade between both countries finally came to the fore.

***

The normalization of Soviet-American relations played an exceptionally important part in developing the successful cooperation between both countries from the end of 1933 up to the early postwar years. Economic ties between the USSR and the United States assumed a particularly wide scope during the Second World War when these countries were allies in the struggle against Hitler Germany. When the war ended the possibilities for developing Soviet-American economic cooperation increased, but unfortunately, because of the policy of US ruling circles, they were not realized. More than that, under the pressure of the most reactionary monopoly groups the American Government chose the path of the cold war and took a number of measures which seriously undermined normal relations between both countries. The United States unilaterally abrogated all trade agreements concluded at various times with the USSR, Czechoslovakia, Poland, Hungary and Bulgaria, and imposed an embargo on the exports to these countries of many goods which were included in proscribed lists of so-called "strategic" goods. In also began to collect higher import duties than those imposed on similar goods from other countries.

According to the calculations of its sponsors, the discriminatory policy of the United States and the other imperialist powers was expected to inflict damage on the socialist countries, retard their economic growth and create great difficulties for their postwar development. But if during the first Five-Year Plan period, when the USSR withstood single-handed the onslaught of the capitalist world and had only begun to build a powerful industry, the anti-Soviet economic drive against the socialist country was unsuccessful, there was still less chance of success for the cold war policy in

economic relations in the postwar period, when socialism emerged beyond the bounds of a single country and became a powerful world system.

More than that, the policy of renouncing normal trade relations with the USSR and the other socialist countries has inflicted considerable damage to the economies of the countries which have applied it. At the same time, the policy of an embargo and economic blockade of the USSR has produced, as N. S. Khrushchev put it, results opposite to those expected by its sponsors and organizers. In a speech made at the Economic Club of New York on September 17, 1959, N. S. Khrushchev said: "We have had to develop production of machines that we did not have before and intended to buy from you, and now we are not dependent on anyone in this respect. Thus, the artificial restriction of trade with the Soviet Union has strengthened rather than weakened us." (29)

The American policy of discrimination in trade with the USSR is obviously bankrupt. This has been admitted by many American leaders who hold that the embargo policy did not achieve its aim. But the cold war adherents continue to oppose a normalization of economic cooperation between both countries. It is noteworthy that the arguments they adduce to prove that trade with the USSR is "impossible" and does not hold out any prospects are not new and were refuted by life long ago.

As far back as the 1930's, reactionary US propaganda, seeking to undermine and weaken the desire of American businessmen to develop economic ties with USSR, proclaimed the false thesis that as the USSR industrialized it would take the path of autarchy and curtail foreign trade with the capitalist world. Even then, reality itself quickly demonstrated the utter insolvency of such inventions.

Not only during the first Five-Year Plan period, but even now, when the Soviet Union has become a mighty socialist power and possesses a first-class industry and a large-scale, mechanized agriculture, with its economic development resting largely on internal resources, it is interested in the greatest possible expansion of economic ties and trade with all countries, especially with the United States. The USSR is now trading with more than 70 countries and its foreign commerce is steadily growing. Suffice it to say that the Soviet Union's trade with the capitalist countries reached 10.4 billion rubles in 1959 compared to 3.8 billion rubles in 1953. (30) Trade relations with many capitalist countries, including Britain, France, Finland and others, are developing successfully.

The Soviet Union is displaying great readiness to develop mutually advantageous economic cooperation with the United States. In the summer of 1958 the USSR proposed to the United States that ene getic steps be taken jointly to improve and dev trade relations between both countries. In the sage of N. S. Khrushchev, Chairman of the USS Council of Ministers, to President Dwight D. E hower of the United States, it was pointed out t the Soviet Union was ready to place orders wit United States for industrial equipment, includin complete sets for entire plants and factories fo the production of synthetic materials and artic derived from them, to buy licenses and to invit American specialists to work at Soviet plants a consultants, etc. Soviet purchases of equipmen and other goods in the United States, given unde standing by the two sides, could reach several billion dollars in the next few years. (31) The proposals of the Soviet Union exposed once aga the insolvency of the arguments advanced in the United States by some leaders against normaliz Soviet-American trade.

The interest of the Soviet Union in developing international trade with all countries, including United States, is explained first of all by the fa that the USSR regards this as a good basis for proving relations between countries, for promo and strengthening peaceful coexistence of state with different social systems. "Broad develop- ment of trade," N. S. Khrushchev remarked in speech at the reception in honor of the Soviet G ernment delegation at the International Leipzig Fair on March 6, 1959, "plays an important pa strengthening mutual confidence among peoples easing international tension." (32) At the sam time foreign trade makes it possible to utilize advantages of the international division of labo the interests of a country.

The position of the Soviet Union on the develo ment of Soviet-American economic relations a the present stage was thoroughly explained by N S. Khrushchev during his visit to the United Sta on a mission of peace and friendship. He drew attention of the Americans to the fact that the S viet Union possesses an industry which provide the country with everything it needs. That is w "our economy does not suffer from the fact tha trade is not developing between the USA and th USSR." Of course if there were such trade it would be of advantage to both countries, for "trade," N. S. Khrushchev remarked, "utilizes benefits of the international division of labor, t benefits of specialization in industry." (33) Bu trade is important not only economically. It "i important as a means of easing international te sion."

The Soviet Government proceeds from the premise, N. S. Khrushchev said, that to develo

nsolidate economic cooperation and trade it remely important to improve political relaetween the United States and the USSR. present bad trade relations between our counare not an economic but a political factor," nd if relations are improved, mutually benetrade is arranged and cultural and other conare extended, "we will thereby make a big bution to relieving international tension, to use of peaceful coexistence and the strengthof world peace. And this, in turn, will have a cial influence on the lives of our peoples and nkind." (35) The statements of N. S. Khrushn America aroused great interest. Many ssmen increasingly speak in favor of abolishscrimination and developing economic, culand other ties between both countries. A New Herald Tribune poll of 48 major US industrial nies showed that "29 of them hoped for an vement in the prospects of Soviet-American as a result of Khrushchev's visit. Many ican firms are ready to conclude contracts ne Soviet Union." (36)

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history of relations between the USSR and ited States shows that the Soviet Union, by the Leninist principle of peaceful coexe of states with different systems, has always to establish friendly relations and strengthen mic cooperation with the United States. Cererican circles, whose policy with regard USSR has never been marked by realism and t corresponded to the vital interests of the ican people, have been the main stumbling to normalizing relations between both coun-

experience of history has demonstrated the solvency of the attempts of reactionary cir- prevent the development of economic relaetween the USSR and the United States. Life nfirmed Lenin's prediction that economic ity and the need for economic ties with the Union will come to the fore. It was as a reeconomic necessity and under the pres- f the masses that the US Government in 1933 mpelled to abandon the bankrupt policy of cognition and economic isolation of the USSR, dertake the establishment of normal diplo- and trade relations with the USSR. The de- f American business circles to expand trade ith out country at present likewise expresses ed of the American economy to develop such ns.

record of history shows that the Soviet state ays ready to develop normal economic relawith all countries who create adequate conditions for this, both as regards credits and Soviet exports. The USSR has favored and continues to favor the broadest possible development of mutually advantageous and equal economic ties with all countries, the United States included.

Footnotes

(1) Let Us Live in Peace and Friendship, p. 278.

(2) V. I. Lenin, Collected Works, Vol. 26, p. 233 (Russian edition).

(3) Ibid., Vol. 30, p. 32.

(4) Ibid., pp. 340, 342.

(5) Sovetsko-Amerikanskie otnosheniia 1919-1933, A Collection of Documents, Moscow, 1934, p. 46.

(6) TsGIAL, f. 1276, op. 7, d. 93, l. 111.

(7) F. L. Schuman, American Policy Toward Russia Since 1917, New York, 1928, p. 17.

(8) Statistical Abstract of the United States, 1926, p. 436.

(9) Ibid.

(10) V. I. Lenin, Collected Works, Vol. 31, p. 420.

(11) Vneshniaia torgovlia Soiuza SSR, Statistical Survey, Moscow, 1931.

(12) Vneshniaia torgovlia Soiuza SSR za X let, sbornik materialov, Moscow, p. 129.

(13) Calculated from data in the statistical handbook Vneshniaia torgovlia SSSR za 20 let, 1918-1937 gg., Moscow, 1939, pp. 11, 29.

(14) Statistical Abstract of the United States, 1936, pp. 451-452.

(15) D. Mishustin, Vneshniaia torgovlia i industrializatsiia SSSR, Moscow, 1938, p. 157.

(16) p. 137 of source cited in footnote 13.

(17) TsGAOR i SS.

(18) Ibid.

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(22) Economic Review of the Soviet Union, October 15, 1931, p. 467.

(23) TsGAOR i SS, f. 5240, op. 9, d. 550, l. 9.

(24) Sovetsko-amerikanskie otnosheniia v 1919-1933 gg., pp. 69-70.

(25) Statistical Abstract of the United States, p. 450.

(26) Economic Review of the Soviet Union, March 1932, p. 100.

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(28) p. 99 of source cited in footnote 24; Izvestiia, August 16, 1951.

(29) Let Us Live in Peace and Friendship, p. 127.

(30) N. Patolichev, "The Soviet Union Stands for the Expansion of Trade with All Countries," Pravda, March 9, 1960.

(31) Pravda, June 6, 1958.

(32) Pravda, March 7, 1959.

(33) Let Us Live in Peace and Friendship, p 315.

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A Law of Development of Socialist Countries

Socialism proceeds from the productive forces which it has inherited from the past social-economic structure. But capitalism, as we know, develops unevenly. Hence there are differences in the levels of economic and cultural development among the states that have broken away from the capitalist world and have taken the path of building socialism.

The most developed of the countries that now constitute the world socialist system were the Soviet Union, Czechoslovakia and the German Democratic Republic. Those that held an intermediate position were Poland, Hungary and the Korean People's Democratic Republic. The underdeveloped agrarian countries were Rumania, Bulgaria and the People's Republic of China. As for Albania, the Democratic Republic of Vietnam and the Mongolian People's Republic, pre-capitalist relations largely predominated in their social and economic systems.

With the victory of socialism in a number of countries and the establishment of a world socialist system there arose a completely new law in their development. Instead of the unevenness of development of different countries there came into effect the law of balanced and proportional development. Furthermore, the formerly backward countries are gradually rising to the level of the more advanced ones. Characterizing this process, N. S. Khrushchev pointed out in his report to the 21st Congress of the CPSU: "The law of balanced, proportional development operates under socialism, with the result that countries which were economically backward in the past are able to rapidly make up for lost time and raise their economic and cultural levels by drawing on the experience, cooperati and cultural assistance of other socialist countr In this way the economic and cultural progress all the socialist countries is evened out."

The thesis on evening out the economic and c tural levels of states in the course of socialist struction, as advanced by N. S. Khrushchev, is theoretical generalization of the experience of building socialism and its further prospects, a contribution to Marxist-Leninist science. It is only of theoretical but also of important practi significance for the further development and co solidation of the world socialist system.

Without going into all the factors involved in process of evening out the economic levels of t socialist countries, we shall discuss the most portant of them.

The basis of the rapid economic and cultural progress of the less developed countries is so ist industrialization and the establishment and velopment of a large-scale domestic industry. must be stressed that this process is taking pl along the lines of raising the industrial produc of the less developed countries to the level of more developed ones, and their general expans

Under the operation of the law of balanced a proportional development, favorable possibilit have been created for the advance of the natio economy in general and of industry in particula Life itself has proved this. While industrial p duction in the socialist camp increased by app mately 6 times between the prewar period and

and it increased by 6 to 7 times, in Bulgaria imes, and in Albania — 22.5 times. With an ge annual increase in industrial production of for the entire socialist camp in the period o 1959, the increase in the People's Republic na amounted to 28.4%, and in the Korean Peo- Democratic Republic to 22.7%.

high rates of socialist industrialization of s developed countries have made for a nota- rease in the share of their industrial produc- ncluding means of production, in the gross al product, a rise in their productive forces e evening out of the structure of social pro- n.

share of industrial production in total indus- nd agricultural output in Hungary increased 2% in the prewar period to 71% in 1959; in ia — from 40.5% to 66.6%; in Albania — from o 55.7%; in the Korean People's Democratic ic — from 28% in 1949 to 71% in 1959.

data show that Poland, Hungary, Rumania, ia and the Korean People's Democratic Re- have already become industrial-agrarian ies. The People's Republic of China is being transformed from an agrarian to an indus- grarian country. Albania, the Democratic ic of Vietnam and the Mongolian People's ic have also achieved important successes development of a socialist industry.

strialization of the less developed socialist ies and a rise, on this basis, of the technical f production, are helping to eliminate the nces between the socialist countries in such s of economic development as national in- per head of the population and the standard of of the working people. This is expressed in ease (particularly in the less developed ies) in the accumulation fund in the national e for expanding socialist reproduction, and consumption fund. Supplies of manufactured for the masses are increasing; public educa- ublic health measures, culture and the arts ing developed.

advantages of the socialist mode of produc- e opening up new possibilities for technical vement, increases in the productivity of so- bor and the utilization of new natural re- s and synthetic materials in economic ac-

evening out of the economic and cultural of the socialist states has been greatly pro- by their scientific and technical cooperation. ee exchange of scientific and technical ements, designs of industrial and cultural s, licenses for the production of machines uipment, and experience in introducing new technological processes is widely practiced among the fraternal countries. Cooperation exists in scientific research and designing, in training specialists and in improving the skills of specialists for the national economy.

International socialist division of labor, specialization and cooperation in production, play an important role in evening out the economy of the socialist countries. Specialization and cooperation in production, which constitute the highest forms of collaboration, relieve the majority of the socialist countries of the irrational, and in a number of cases, of the impossible task of developing all their industries to a similar degree. Since all of them rely upon the economic and defensive might of the entire socialist camp, these countries have the opportunity of developing those branches for which they possess the most favorable natural and economic conditions, the necessary production experience and skilled specialists. This makes it possible to increase serial production and raise its technical level, to extensively apply advanced technology, to improve the quality of production and to reduce production costs.

Specialization and cooperation in production in the socialist camp thus ensure an economy of labor power, resources and time, raise the rates of industrialization of the less developed states, and accelerate the process of evening out the socialist economies.

Another factor promoting the evening out of socialist economies is assistance to the less developed by the more developed socialist states, primarily the Soviet Union. True to its international duty the Soviet state granted the fraternal countries extensive credit on exceptionally easy terms.

Under existing agreements the Soviet Union is supplying the people's democracies with complete sets of equipment and is granting technical assistance in the construction of 668 industrial enterprises and 229 municipal service establishments, installations, shops and other projects. Commodities are supplied at prices considerably below those prevailing on the world capitalist market.

The table shown on the following page presents a picture of the assistance granted by the Soviet Union to the fraternal socialist countries.

The enterprises supplied by the USSR include: 87 power stations, 66 ferrous and non-ferrous metal plants, 100 machine-building plants, and many others. Czechoslovakia and the GDR also supply a considerable number of complete sets of equipment to the fraternal countries. The equipment supplied conforms technically to the highest standards.

Number of Enterprises, Shops and Installations Under Construction in the People's Democracies with the Assistance of the Soviet Union

Countries	Enterprises	Separate shops and installations
China	291	59
Poland	67	8
Hungary	27	4
Rumania	63	23
Bulgaria	54	25
Albania	76	23
Korean People's Democratic Republic	30	15
Mongolian People's Republic	21	10
Democratic Republic of Viet-Nam	16	15

Noting in his report to the 21st Congress of the CPSU the important role of the international division of labor, of economic cooperation and mutual assistance in developing the productive forces of the socialist countries, N. S. Khrushchev said: "This offers additional new opportunities of expanding production in the socialist camp and in each individual socialist country. By itself no coun- could develop at the rapid pace at which it is developing within the system of socialist countries."

The rapid evening out of the level of development of the socialist countries leads to the further consolidation of the world socialist system and a rise in the rates of its development, to the further strengthening of the unity and friendship of the peoples of the socialist states. In these countries the prerequisites for the transition from the first phase of communism to its second phase will be created at accelerated rates. The prospects f the simultaneous advance toward communism all socialist states raise the revolutionary init tive and creative efforts of the masses to a ne level and rally them more closely in a united ternal family of builders of their bright future communism.

In this way the economic and cultural progr of the socialist states is evened out on the bas the creative application of the general laws of cialist construction, particularly on the basis the socialization of the basic means of product and the gradual socialist transformation of ag culture, the planned development of the nation economy and the socialist revolution in the fie ideology and culture. The practical expressio this lies in more or less evenly overcoming th heterogeneous nature of the economies and cr a uniform type of productive relations, buildin and rapidly developing a modern, large-scale dustry, primarily heavy industry, in the forme backward countries; improving mecaanization agriculture; reducing the gap between the leve labor productivity; promoting culture and scie and as a result of all this, reducing the gap be tween the standards of living of the masses.

The historical experience of the Soviet Unio the other countries of the socialist camp is of mendous significance for the national liberatio movement of the peoples of Asia, Africa, the M and Middle East, and Latin America. It inspir the people who have thrown off the yoke of col slavery and are following the path of their ind pendent national development.

The example of the socialist countries is in creasingly convincing millions of people in all corners of the world of the superiority of the cialist road of development. The friendship, c operation and mutual assistance in the socialis camp are helping to rapidly overcome the eco ic backwardness of certain countries and are contributing to the general economic and cultu progress of the peoples.

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